BULLETIN

MADRAS DEVELOPMENT SEMINAR SERIES

VOLUME IV NUMBER 11 NOVEMBER 1974

74, SECOND MAIN ROAD, GANDHINAGAR,
ADYAR, MADRAS-600 020.

MONTHLY BULLETIN

Vol IV No. 11

CONTENTS

		Page
1. Editorial — Some Highlights		
I. General Economic Scene	...	619
II. Agricultural Development	...	635
III. Industrial Development	...	639
IV. Education, Science and Health	...	642
V. Employment	...	645
VI. Other Items	...	646
2. Informal Education *By Mr. S. V.Chittibabu*	...	649
3. Utilisation of Installed Capacity	...	659

RENEWAL OF SUBSCRIPTION FOR 1975

—0—

Subscribers are reminded that their subscription for the Bulletin expired on December 31st, 1974. This is a request and reminder to all subscribers to renew their subscription for 1975. In view of the increased cost of paper and printing, the annual subscription for the Bulletin for 1975 has been increased to:

Rs. 12/-

or

US $ 2/-

or

£ 1.00

Indian subscribers should send their subscription of Rs. 12/- for 1975 before January 15, 1975. Foreign subscribers should send their 1975 subscription by February 28th 1975.

—

EDITORIAL—SOME HIGHLIGHTS

I. General Economic Scene

State:

Prices and Rice distribution: The September consumer price index for the State moved from 280 in August (See last issue page 579) to 285 in September. The major element in this price rise was the rise in the price of rice which in the open market ruled around Rs. 3.50 to Rs. 4 per kg. well above the Rs. 3 per kg. announced by the government in August, for distribution through the fair price shops. In fact in some places like Karur, the price per kg. rose to Rs. 4.70, though in general, prices ruled around Rs. 3.50 to Rs. 4. The rationed rice for those earning below Rs. 500 per month was priced at Rs. 2 in accordance with the government announcement; the problem here being the long queues and wait involved for the purchasers. By the end of September the government purchased 10,000 tonnes of rice from Andhra Pradesh which was held in stock, to be moved to scarity areas until the Kuruvai harvest came into the market. In addition, sugar card holders were allotted 2 kgs of wheat per month, with a larger allowance to regular wheat consumers. There is need for a review by the government of the procurement and distribution system for rice and other essential goods in light of the short supply of rice and the price rise faced during the last 3 months by the State which is a rice surplus State. The basic problem is of course that there can be no isolated island of sufficiency or plenty in a land of scarcity. Even more than Tamil Nadu, Andhra Pradesh is a rice surplus area but even there rice prices more than doubled from Rs. 1.16 per kg. the government price, to Rs. 2 60 per kg. There is need for an increase in the production of rice in all States for the situation of shortage to be removed. In such a situation, restriction of rice movements which is necessary to ensure fair and equitable distribution of the limited supply, invites smuggling of rice across borders as happened between Andhra Pradesh and Tamil Nadu in August and September and as recorded in the 24th report of the Estimates Committee of the State Assembly released in mid September concerning the theft, cheating and smuggling of Rs. 60 lakhs of rice and paddy stocks in Valavanur, Tindivanam and Chidambaram and the illegal export of 700 wagon loads to Kerala, West Bengal and Maharashtra. There is also need for revision of the procurement policy which the government is undertaking for the kuruvai harvest (to be referred to later) and a further improvement and increase of fair price shops. The procurement price of paddy for the kharif season will also have a major influence on procurement. The Agricultural Prices Commission recommended a rise of the price from Rs. 70 to Rs. 74 per quintal on the basis of studies into the increased cost of inputs and a reasonable return to the farmer. The conference of Chief Ministers in Delhi in mid September discussed the issue, the majority asking for a much higher price—ranging from Rs. 85 to Rs. 100 per quintal. The Union Govern-

ment decided that the procurement price for rice should be raised from Rs. 70 (See Vol III page 799) to Rs. 74 per quintal, leaving each State to follow a procurement system suitable to its situation. There is to be no takeover of the wholesale trade in rice.

Power: The power position in the State in September was good and the complete lifting of all power cuts as from end August (See last issue, Vol. IV page 580) will continue until the power position is reviewed at the end of the North East Monsoon in December. In fact during September there was surplus generation of power in the State vis a vis the demand for power. The daily generation was 900 MW comprising Neyveli 270 MW, Basin Bridge and Ennore 190 MW plus the Mettur and Periyar generation resulting from their irrigation flows. On the other hand, the demand fell to 20-22 million units against a normal 25 million units due to a decline in the agricultural load because of the rains and the slack in industrial consumption which could not adjust to the lifting of the power cut and which in effect would prefer a smaller cut operating through the year rather than a heavy cut in the lean season. In addition the State's hydel reservoirs are in a good position, their storage being the equivalent of 1,658 million units as against 1,800 million units as at September end last year. Hence the State has been able to "bank" 100 million units in the regional grid in Karnataka. Kerala too banked in the grid during September 200 million units and discussions are underway between the 2 States as to the price at which Kerala power can be used by Tamil Nadu, at 8 paise for the first 200 million units and 8.2 paise for the rest. Kerala also was obliged to bank its power in order to let out water from its full reservoirs to be ready for receiving a fresh supply from the North East Monsoon. This is the time for the regional power plan to be finalised and for this State to push ahead with its long term plans for Tuticorin, Mettur as well as the second atomic project on which the site near Koodangalum has been indicated to the visiting Commission. Another means of saving on energy and providing fertilisers in the rural areas is the use of the Gobar Gas Plants, 3,000 of which are being installed this year under the auspices of the Tamil Nadu Khadi and village Industries Board and 8 associated agencies.

In the Country as a whole, the September power situation was poor, particularly in the North. Punjab and Haryana had the most severe power shortage, with 60 per cent cut in Haryana, a complete cut in power supply to all large industries, small rolling mills and mini steel plants in Punjab from September 23 and a shut down of the Nangal ferliliser factory, due to decreased generation from Bhakra and Badarpur following the scanty inflow into the reservoirs. This stoppage of power to industry including a no power day on September 20 was undertaken in order to use the limited power to save the kharif crop in the two States. The result has been a very serious loss in industrial production in the two States and also in the Delhi Territory, amounting to Rs. 50 lakhs per day for each State. What is disturbing is that there are 120 power projects capable of generating power to irrigate 150 million hectares, which are being held up because of inter-State disputes in this region and the slow clearance of projects by the Union Authorities. UP also extended its power cut—on domestic and industrial consumers in order to divert power for the irrigation of its kharif crops, particularly those hit by drought. Maharashtra after reviewing its weak 1974 monsoon, resulting in 65 per cent storage in Koyna and 50 per cent in Tatas has wisely decided to impose a cut ranging from 4 per cent for service industries, 20 per cent for general

industries, and 25 per cent for domestic and commercial consumption and 33 per cent for street lights from October 1 1974 to June 30, 1975. Gujarat which faced a problem when the Tarapur generation had to be stopped for a week in early September due to an accident, as a result of failure of rains introduced a five day week for HT and LT units. a 20 per cent cut for commercial and domestic use, with normal supply for Agriculture. There is need for early completion of power projects (thermal) and the ending of inter-State disputes on hydel projects and their speedy clearance to avoid the slackening of industrial production in the industrial heartland of the Country.

Administrative Reform: The State Administrative Reform Commission in its fifteenth and final report has made recommendations to enable the secretariat to meet the new demands of development activities and make it more responsive to people's wishes and needs. As the seminar on Plan Implementation pointed out (Vol. III, page S. 82), as governmental functions have moved from the regulatory to the developmental stage, the need to reorient governmental staff to meet the new demands for effective planning, speedy implementation and necessary evaluation of projects and programmes should be met. The Commission has recommended: (a) decentralisation of financial powers to the departments with overall financial control by the Finance Department through budget allotments; (b) Changes in procedures to reduce files, notes etc. and speed up decision making; (c) more effectively passing the advice of technical experts and departmental heads running projects to the secretariat; (d) public enterprises to be under the company form of management in the interest of operational freedom; (e) separate units in the secretariat to deal with public sector units; (f) co-ordination of project work covering several departments to be the responsibility of specially designated Commissioners (g) quick disposal of personnel matters along with programmes of training and speedy recruitment; and (h) An ongoing evaluation programme of operating schemes. These 8 proposals have also been made by the seminar referred to earlier (See Vol. III pages 761-762) and the government should now implement them.

Transport: September recorded several important developments in goods transport services. The State government from September 15 reorganised the Transport department with (a) the Transport Commissioner in overall charge of State transport, (b) Four regional transport officers to be in charge of transport in four zones at Madras, Madurai, Tiruchi and Coimbatore, (c) District transport officers to be responsible for district transport, and (d) 44 Branch Transport offices to deal with transport owners and operators in mofussil centres. Also all transport officers are to be technical persons to help in improving transport efficiency. This re-organisation will facilitate the care and supervision of the 1,62,525 motor vehicles in the State and the smooth administration of the motor vehicles legislation. A second development was the directive from the Union Government not to issue permits for buses for new routes or for additional buses and goods vehicles for the remainder of 1974 and 1975 and to restrict the transport of goods by trucks beyond 500 km in order to save 10-15 per cent of HSD consumption. A third development was the regional conference in Trivandrum of Transport ministers from the 4 Southern States in mid September which requested the Union Government to withdraw the restriction on trucks beyond 500 km. in view of limited railway lines and facilities in the Southern States, endorsed Tamil Nadu's plan to set up a

road transport research and development Institute as a regional centre, established tripartite agreements among Tamil Nadu, Kerala and Andhra Pradesh for operating 25 goods vehicles, including insulated fish carriers, set up committees to study rationalising inter-state carriage routes and means of preventing increasing accidents and established a permanent secretariat for the standing committee of the Transport Commissioners with headquarters at Trivandrum to ensure prompt follow up of the decisions of the annual ministerial conference. At the meeting also Kerala and Tamil Nadu decided to nationalise all inter State bus routes, involving 23 private bus owners in Kerala and 6 in Tamil Nadu, and open 4 new routes making a total of eight. At the Srinagar meeting of the Indian Federation of Transport Operations, the Union Transport Minister noted the general opposition to the 500 km truck transport restriction and assured the conference that the government would review this order. The economics of this matter needs to be worked out more carefully by the government, with trade off in the saving on HSD in favour of kerosene and the cost of and capacity of the railways to take over the load. Finally, the annual report for 1973–74 of the Cheran Transport Corporation is heartening, showing a net profit of Rs. 45.21 lakhs against the previous year's Rs. 7.5 lakhs, equalling its investment of Rs. 45.9 lakhs, increasing its fleet from 312 to 412 and operating at a small increase in fuel and tyre costs of 7 paise and one paisa respectively. It is one of the few public sector units with worker participation and such a positive record.

Housing and Highways : The cement shortage and restriction in the Country to be referred to later has had its negative effect on the State's housing programmes. It has increased building costs and even the payments to be made by middle and low income flat occupiers for whose construction the Housing Board has responsibility. Another casuality is the proposed unit for manufacturing pre-fabricated housing materials (See Vol. IV page 411). With the scarcity of cement now being exported in large quantities to West Asia to pay for our crude imports, the State's housing programme is being contracted. Another contraction is the Rs. 75 crores Highways Fifth Plan programme which is being cut back to cover only missing road links instead of overbridges and widening of bridges. For the first year of the Fifth Plan only Rs. 3.4 crores have been provided.

Water supply : Another essential service that has been hit is rural water supply. This State's plan to provide protected drinking water to 18,900 villages (See Vol. III page 108) is part of the Country's Fifth Plan provision for 1,13,000 villages covering 60 million people. With the scarcity of materials and rise in prices, the allocation of Rs. 574 crores, if retained, is now estimated to cover only 80,000 villages with 45 million people. The impact of this reduction on the State's Plan must be worked out. Meanwhile Madras city has been passing through a period of acute water shortage (See Vol. IV page 356) with two of its reservoirs—Poondi and Sholavaram—completely dry, the hand to mouth supply of 30 million gallons per day being provided by the fast depleting Red Hills reservoir (20 million gallons) and the rest from the Panjetti and Tambarapakkam underground water. An assured water supply should be one of the major features of the MMDA and the city's perspective plan.

Social Security Scheme : The State Government is launching from mid November an important Social Security Scheme under which every family in the State can contribute to receive a monthly

pension varying from Rs. 20 to Rs. 100 for 30 years. A person will get Rs. 100 as the monthly pension if he contributes Rs. 10 a month for 25 years, or Rs. 20 for 20 years, or Rs. 30 for 15 years or Rs. 60 for 10 years. Similarly for a monthly payment of Rs. 10, a pension of Rs. 60 per month accrues after 20 years, Rs. 35 after 15 years and Rs. 20 after 10 years. In the event of premature death, the pension will be paid to the family. This programme follows the seven months old family welfare scheme, under which 356 families of low paid State Government employees including drivers, peons, constables and teachers have received Rs. 10,000 on the death of the government employee. This first Social Security Scheme in the Country will have long term effects on family size, savings, incentives and population growth.

National:

Fifth Plan: The draft status of the Fifth Plan continues. All attention is concentrated on matching the projected real resources with possible targets. As the real resources are eroded with the inflation, in the first round all targets except that of fertilisers have been pruned—steel from 9.4 million tonnes to 7.8 million tonnes, aluminium from 3,70,000 tonnes to 3,00,000 tonnes, cement from 25 million to 23 million tonnes, petroleum from 34.6 million to 26 million tonnes and tractors from 80,000 to 70,000 with social services facing the largest reduction in resources. These exercises to make the targets more realistic should be completed this year, so that the Plan which is a guideline for State, District and National programmes rather than a binding instrument becomes available as the first year of the plan ends. This year's plan is in equally difficult straits, where the objective of keeping the budget deficit down to prevent further inflation is leading to cutbacks in plan projects. In the Annual plan all new projects are being postponed, all targets are being revised, and heavy cuts imposed on education social welfare and housing—the so called non-core sector. Agriculture is being reduced by some Rs. 50 crores and other programmes in the core sector are being examined to make provision to meet the almost monthly DA payments, to provide assistance to States which have suffered drought and floods and to meet to some extent the gap of Rs. 330 crores in State plan resources, which, as in the case of Andhra Pradesh, is going slow on Nagarjunasagar and Kerala which has slowed down Idikki and cut its plan to the level of Union assistance because of an extremely difficult financial situation. The status of the Fifth and Annual Plans reflects the distortion caused by the continuing inflation in the Country.

Prices and anti-inflationary measures: The wholesale price index stood at 325.1 on August 31 compared to 317.7 on July 27 (See last issue, Vol. IV page 583), involving a price rise for August of 2.5 per cent which is slightly lower than the July rise of 2.8 per cent. Food articles' prices continued to rise (5.6 points), as did the prices of industrial raw materials (18 points), machinery and transport equipment (13 points) and manufactures (5 points). The actual rise in food prices for the fixed salary earner was higher, as noted earlier, as while the ration price for rice was Rs. 2 per kg., the open market price was Rs. 4 and above per kg. and so too in the case of wheat and sugar. For the year ending August 1974, the consumer has suffered a 30.6 per cent price rise, the highest being a 44.8 per cent rise in cereals prices, as stated by the Minister for Agriculture in the Lok Sabha in early September. There is a little slowing down of the rate of price rise due in large part to the decision of the government and the RBI to act. The initial price response to the government's

anti inflationary package outlined in Vol. IV pages 532-533 was discouraging—being an increase of 3.7 per cent in food prices including a 5.8 per cent rise in cereals, 6 per cent in pulses and 8 5 per cent in edible oils. The Reserve Bank, statement for August shows a decline in money supply with the public (around Rs. 200 crores), as well as aggregate monetary resources (Rs. 280 crores), in State government loans (Rs. 50 crores) and scheduled banks credit (Rs. 120 crores). Its annual report for 1973-74 however records that bank credit to the government increased **by** Rs. 675 crores and to the commercial sector by Rs. 1,724 crores, including serious slack season increases of Rs. 1,034 crores to government and industry as noted in earlier issues of the Bulletin. Despite its critical stance on demand management and monetary measures and rejection of demonetisation and the Semi-Bombla proposal, it admits the role played by oversupply of currency and credit, calls attention to the heavy government expenditure, which in addition to an eleven per cent rise in revenue, ran a Central and State's deficit of Rs. 861 crores, later revised to Rs. 495 crores and refers to the decline in savings rates as seen in the fall of deposit growth rate from 20.8 per cent in 1972 to 18.7 per cent in 1973 reported by the Deposits Insurance Corporation depressing the marginal ratio of household savings along side of a decline in government savings of 8.3 per cent against the target of 14.6 per cent. DAs are now falling due every month on June 1 and July 1 and very nearly on August 1, each costing Rs. 30 crores. As part of its policy of reducing the rate of credit increase in consequence of the Interest Act of 1974 (See last issue Vol. IV page 583) RBI on September 25 raised export credit interest rates from 7 to 8 per cent, and 10.5 to 11.5 per cent and on food procurement from 11 to 12 per cent. It also continued beyond September 27 the additional 2 per cent statutory cash reserve requirement of the scheduled banks. The decision of ARC not to provide finance where the level of overdues of co-operatives was high and the call to co-operatives and various States corporations to reduce their overdues has anti-inflationary overtones. The Union Government as forecast in the last issue amended MISA and arrested over 100 smugglers and black market operators in September, intensified its drive to counter the large scale tax evasion and under valuation of property (the Venkatappiah committee on Central Excises reported in September large scale duty evasion by 10 named industries) and planned a more effective dehoarding drive. It also decided in early September to increase the dividend rate on preference shares from 9.8 to 11 per cent and on bonds and debentures from 8.5 to 10 per cent to meet some of the problems raised in its dividend limitation legisation. The government is acting also to regulate unauthorised capacity production consisting of (a) small and medium units, which using improved technology, have increased their capacity which will be recognised, (b) units which were not assigned any capacity which will also be regularised, (c) units of the larger industrial houses which have exceeded their capacity by upto 30 per cent which will be regularised if in the priority sector and the distribution be through government outlets, and (d) the larger industrial houses now facing enquiry by the Sarkar Commission. This action should help the counter inflationary forces. In sum the important element here is that the government has began to to act so that people's expectation of future rises in prices is likely to be held in check.

State's loans: In September the second instalment of State's loans were announced for Rs. 75.25 crores, which make the total States' borrowing for the year, Rs. 280.5 crores. In this second round,

five States issued loans for the first time and eight including Tamil Nadu (Rs. 8.75 crores) for the second time (See last issue Vol. IV page 579). It is hoped that these additional resources will keep the State deficits down, particularly that of the largest borrower UP, whose net borrowing for this year will be Rs. 29.4 crores.

Performance of the Economy: CSO estimates for the economy in 1973–74 show a 4 per cent increase of the net domestic product at constant (1960-61) prices over the 1972–73 NDP of Rs. 19,273 crores. The per capita income was however almost stagnant compared to the decline of 1.8 and 0.6 per cent in the two previous years. The World Bank's annual report confirms this overall picture but points to the good performance of Punjab and Haryana due to ground water resources and the use of new technologies. It also refers to the low world prices for India's traditional exports, tea and jute, which did not share in the world inflation. India's foreign debt in March 1974 amounted to $ 11,652 million, a further depressing force on the economy. CSO estimates also report on the 6.5 per cent rate of domestic capital formation for the decade 1960-61 (Rs. 2,098 crores) 1970–71 (Rs. 3,464 crores), two thirds being in construction while that in machinery and equipment declined in the second half of the decade from Rs. 1,445 crores in 1965-66 to Rs. 1,191 crores in 1970-71. Net domestic saving in that decade increased from Rs. 1,300 crores to Rs. 4,401 crores, the public sector's share falling from 22.8 per cent to 19.2 per cent. Household savings was the major contributor being 85 per cent in 1967-68 and 76 per cent in 1970-71. Private corporate savings fluctuated from 10.1 per cent in 1961-62 to 2.5 per cent in 1968-69, rising to 5 per cent in 1970-71. The ratio of net domestic savings to net national product was 13 per cent in 1970-71. Quoting some of these figures, the RBI annual report refers to major features of 1973-74 as: (a) unprecedented inflation (b) a better overall availability of agricultural commodities (c) an increased aggregate industrial availabilty of agricultural commodities (c) an increased aggregate industrial production despite power and transport bottle necks (d) problems with the distribution system, and (e) high rate of government expenditures, as noted earlier. There is a certain air of optimism in the report which is not borne out by the hard statistics or the analysis that it sets forth. In fact there is no reference to some recessionary trends which are making themselves felt. For instance, it is reported in September, that Rs. 50 crores of imported materials are lying with STC and MMTC because of falling demand and the credit squeeze. Industry is waiting also for their price (copper, lead and other materials) to fall in line with declining world prices. The performance in the last year was a poor one.

Industrial growth: Unlike the suggestion in RBI's annual report, the Union ministry of Industry statistics show that industrial growth for 1973-74 at 200.2 for March 1974 was 0.2 per cent compared to 0.3 per cent for the previous year. Undermining and quarrying, coal registered an increase of 2.3 per cent but in vanaspati, textiles, paper, fertilisers, cement, steel and aluminium, there was stagnation or decrease. The ministry's forecast for the current year is that the power and transport bottlenecks will involve low steel and aluminium production and the increasing cost of imports might result in only a marginal improvement. The statistics on production in selected industries for the first four months of this year, April-July published by the ministry shows a rather sombre industrial profile—with only sugar showing 43 per cent increase and electricity plus 6

per cent while declines are recorded in aluminium (-21.6 per cent) vanaspati (-10.4.), commercial vehicles (-8.5), cement (-7.4) and jute and cotton yarn (-1).

National Production Front:

Public sector performance: In refreshing contrast to the general industrial scene, is the performance of the public sector units led by BHEL and HMT under the Ministry of Heavy Industries, which show a profit of Rs. 66 crores in 1973-74 compared to the aggregate losses of Rs. 95 crores in the past six years (See Vol. III pages 172, 328, 405-406 and 701-702) and are performing this year to produce a profit of Rs. 150-200 crores. They are now working to 70 per cent capacity, have increased their turn-over by 45 per cent in the first quarter of this year and are managing their inventories so that they are cut from 5.8 to 4.4 months' cost of production and from 50 instead of last year's 70 per cent of their total assets. This trend has continued in July and August, with the five months' production this year being Rs. 171 crores compared to last year's Rs. 115 crores for April-August. Even HEL has turned the corner and the good aspect is that this increase is a quantitative production increase and not simply a value one. The Bureau of Public Undertakings has helped in this sound record.

Steel: HSL also turned the corner in 1973-74 and for the first time in six years showed a profit of Rs. 4.71 crores, against last year's loss of Rs. 27.8 crores. Bhilai and Rourkela were the major earners with a profit of Rs. 27.5 crores, while Durgapur recorded a total loss of Rs. 23.2 crores. NMDC also showed a profit of Rs. 1.58 crores and HSWC of Rs. 4 lakhs. Bokaro recorded a loss of Rs. 10.43 crores mainly due to the depreciation element. For the current year, steel from indigenous sources will be 5 million tonnes from SAIL plants, 8,40,000 tonnes from arc furnaces and 2,00,000 tonnes by reduced inventories plus about 1.1 million tonnes imports including about half from last year's imports. The total availability of steel this year will be 7 million tonnes against last year's 5.67 million tonnes. On this basis the government has issued instructions to supply steel to engineering export fabricators the year round at JPC price to keep up our export momentum. As a result various devices are being developed to economise on steel including the CBRI project to replace steel by bamboo for reinforced concrete structures. The first five months—April—August 1974—recorded a production above the target of 1.84 million tonnes, leading to a fall in prices of bars and rods, which are being exported. Durgapur's production of 65,000 tonnes of saleable steel in July was the best in 8 years, TISCO recorded an all round production increase in iron, steel ingots and saleable steel by 10 per cent in August. IISCO's August production of pig iron, steel ingots and saleable steel also improved, Rourkela which attained 85 per cent of last year's target registered further production increases in August, and Bokaro is all set to produce 9 lakh tonnes of light plates, 1.7 million tonnes of finished steel, 7.5 lakh tonnes of pig iron and 1.2 lakh tonnes of ingot steel. Steel production should, this year, be on target.

Crude: The Union Government's demand-supply estimates for crude and its products for this year are: motor spirit 1.23 million tonnes production, 1.27 million tonnes demand, Naphtha production 1.8 million tonnes and demand 1.65 million tonnes, kerosene availability 2.3 million tonnes and demand 3 million tonnes, HSD 5.5 million tonnes production and demand 6.2 million tonnes, furnace oil indigenous supply 3 million tonnes and

demand 5 million tonnes. Against this, indigenous crude production will be 7.5 million tonnes against last year's 7.2 million tonnes, crude imports will be 13.1 million tonnes against last year's 13.4 million tonnes. In view of the continuously increased prices asked by Burmah shell and Caltex (See last issue Vol. IV page 585) to be followed by a further rise to compensate OPEC's decision to freeze prices till this year end but to raise the tax and royalty rate on the companies, the first effect was the increased 20 cents price requested by Esso adding up to $ 9.76 per barrel. The government is diverting additional imported crude to public sector refineries and cutting back on foreign exchange allocation to the foreign companies. This is also because the government imports are available on seemingly easy and soft loan terms. For the 1974 crude through put of 20.5 million tonnes, the public sector refineries of Gauhati, Barauni, Koyali, Haldia, Cochin and Madras will process 13 million tonnes (last year 11.48 million tonnes) with Burmah Shell processing 2.5 million tonnes against last year's 4.48 million tonnes and Caltex 7,00,000 tonnes against last year's 1.11 million tonnes. Against this background, the foreign refineries joined with Indian ones in pressing for a price rise to avoid their heavy losses. On September 18, the government increased the prices of petrol, kerosene, HSD and LDO by 5 to 6 paise per litre, cooking gas by Rs. 1.04 for 15 kg and furnace oil by Rs. 50 per kile litre. The losses suffered from under recoveries by the refineries were estimated at Rs. 12 crores per month each (See last issue Vol. IV page 585) (perhaps a little exaggerated) and the price increases will give them an additional Rs. 6 crores a month, which together with various payments to them from the Crude Oil Equalisation Fund, freight and other surcharges will leave them in a comfortable position. Naphtha supplies under the revised product pattern of the refineries have increased by 20 per cent, providing a full complement of feed stock to the fertiliser plants and an expanding export component. Koyali is expanding its cooking gas output from 70,000 to 90,000 tonnes. The Esso takeover of its contracts with private units has been extended by 6 months by legislation and negotiations are under way with Burmah Shell units on crude supply and the price factor and the government's equity participation in it by the year end. The government also, under the Essential Commodities Act, has instructed the oil marketing companies to supply petroleum products to retailers who have no regular supplies so that agriculturists and consumers in remote areas will always have supplies. Meanwhile oil exploration activities are being intensified. ONGC with the help of Soviet equipment and experts has identified five sites for oil and gas production in the Kashmir valley, four of which will yield one lakh cubic metres of gas. Also by November a foreign firm will be contracted for oil exploration in the Cauvery off shore areas and a second well drilled in early October in Bombay High.

Coal: Plans for carbonisation plants have moved forward with the preparation of projects for 3 such plants througt gassification of coal at Singareni, West Bengal and Maharashtra at a cost ranging from Rs. 16 crores to Rs. 25 crores. These plants can become operational before the end of the Fifth Plan, if they are commissioned now. The West Bengal plant to be set up at Bhankuni, and the Maharashtra plant to be located at Bombay will each need a daily coal feed of 1,500 tonnes to make 1,300 million cubic feet of gas per day. Singareni with 900 tonnes will produce cooking gas. Coal production for the 4 months April-July was only 27 million tonnes (which was an increase of 1.4 million tonnes over the four month period in 1973) means that the year's

target of 95 million tonnes (See Vol IV page 419) will not be achieved. The government has scaled down the target to 88 million tonnes, a reduction which does not meet the plans to change over the economy to a coal base. It is to be hoped that finance, power and transport will be maintained at a level to reach at least this lower target. Meanwhile the 60 per cent price increase in coal in the first six months due to the additional transport and handling charges, the development cess consequent on the 1974 Act and the 6 per cent increased railway freight charge have resulted in a payment of Rs. 20 crores by industrial consumers and further 10 to 15 per cent by consumers in Maharashtra and Tamil Nadu who must meet long distance haulage costs.

Sugar: At the end of September, the Union Government announced sugar prices for the 1974-75 season starting October 1, whereby the minimum price is Rs. 8.50 per quintal for a recovery of 8.5 per cent (up from Rs. 8 last year (See Vol III page 556) with an additional 10 paise (up from 9.4 paise last year) for every 0.1 per cent increase in recovery. While the announced prices do not meet the demand of growers for a price of Rs. 10-12, they should not push up levy prices, which will be fixed next month. The free price of sugar which as noted earlier, is ruling at high levels can be brought down by larger releases as witnessed in Madras (a decline of Rs. 12 per quintal) and Bombay (decline of Rs. 20 per quintal) in September. For this there is need for increasing sugar production. The July production was 30,000 tonnes compared to 20,000 tonnes last July and the total production for the first 10 months of 1973-74 season was 39.05 lakh tonnes, the internal consumption being 29.54 lakh tonnes and export 3.28 lakh tonnes during this period. This is a long way from the Fifth Plan target of 60 lakh tonnes of sugar and 96 lakh tonnes of gur and khandasari requiring 177 million tonnes of sugar cane. Part of the reason for the gap is the non-implementation of 100 litres of intent and 44 licenses causing the 23.5 lakh tonnes difference between licensed capacity (66.5 lakh tonnes) and installed capacity (43 lakh tonnes) The other reason is the increasing diversion of sugar cane for gur production in UP and Maharashtra. Action is needed to execute licenses and increase cane production.

Textiles and carpets: The September 21 ordinance nationalised the 103 sick mills (See Vol. IV pages 442, 500 and last issue page 588) as from 1 April 1974, involving acquisition costs of Rs. 39.18 crores and their administration by the National Textile Corporation and as appropriate through subsidiary corporations. The Union Government has taken over all the liabilities of these mills which are to be met in an order of priority—Union and State government loans, wages and salaries of employees and the pre-take-over loans. At a time of financial stringency this take over will be justified only if there is increased production and effective distribution of the textiles and yarn to the consumers. Production in 96 of the mills (34 directly managed by NTC) increased in the first six months of this year by 57.5 per cent compared to the first six months last year. There is need for further modernisation and expansion of the nationalised mills. The textile mills are pressing for a 25 per cent increase in their capacity which will have to be examined on an individual basis particularly in light of the decision that their controlled cloth production should be doubled this year from 400 million sq. metres to 800 million sq. metres and their distribution through co-operatives and State governments on the basis of the ration cards. The other priority is import of machinery for export oriented and weaker

textile mills. On carpet weaving, to meet the increasing export demand for carpets, the government has launched through the all India Handicrafts Board a Rs 15 crore scheme to train 50,000 weavers so that carpet production may more than double from the current Rs. 25 crores to Rs. 55 crores. Under the scheme 20 persons are being trained under each weaver so that a wide decentralised effort is being undertaken.

Tyres, Newsprint and cement: As a result of the decontrol of prices in April (See Vol. IV pages 354. 537), it is expected that the production of 5 million tyres in 1973 and 4.7 million tubes will increase this year to meet the increasing demand. With the three new units starting production a 10 per cent increase is possible. In regard to newsprint against a demand of 3.5 lakh tonnes, this year's supply is 2.45 lakh tonnes including 2 lakh tonnes imports and 40,760 tonnes additional local production. The Kerala project, the 3 HPC projects and 5 private sector schemes in UP, HP, Karnataka and Maharashtra should together help in reaching the Fifth Plan target of 5 lakh tonnes. Cement production which declined in July to 10.75 lakh tonnes picked up to 12.16 lakh tonnes in August due to better availability of coal, oil, power and transport. The Cement Control Order (See Vol IV page 552) and the increased availability brought open market prices down from Rs. 40 to Rs. 30 a bag. Further to the price rise reported in the last issue, the government as of September 1 granted a further increase of Rs. 4.95 a tonne to neutralise the increased freight rates announced in the supplementary railway budget. These increases should help the industry execute its expansion plans.

Fertilisers: Against the World Bank forecast of the $ 5 billion of new investments needed to meet the growing demand for fertilisers in the developing world, it is not surprising that our fertiliser schemes are experiencing financial constraints. The Paradeep project which will have a capacity of 3.45 lakh tonnes of nitrogen, 3 lakh tonnes of phosphoric acid and which has attracted French foreign exchange assistance of Rs. 60 crores is held up because of the lack of rupee resources of Rs. 100 crores. For the current year Rs. 165 crores are being expended on the Country's fertiliser programme, including Rs 11 crores by NFC and Rs. 20 crores by FACT. Similarly the 3 projects originally planned with Japanese credit, due also to cost escalations are now reduced to 2, Bhatinda and Mathura or Panipet—with a capacity each of Rs. 2.35 lakh tonnes of nitrogen. On the basis of the coal based fertiliser projects at Talcher and Ramagundam to be followed by Korba with a capacity of 2.28 lakh tonnes of nitrogen each, there is urgent need to study the coal based technologies involved and extend their use rapidly. For this year, fertiliser availability will be 30 lakh tonnes, half produced locally and half imported.

Agricultural production: As at September end, the kharif crop prospects are very poor and a 10 per cent shortfall against last year's 67 million tonnes is probable. In the last issue the extensive damage to crops and lives from floods was noted in UP, Bihar, Assam, West Bengal and Kerala. In Bihar alone, 11 lakh tonnes of maize and paddy worth Rs. 139 crores were reported lost in the floods. In September a serious drought situation was reported in Gujarat, Rajasthan, Orissa, Madhya Pradesh, parts of Maharashtra, West Bengal, UP and Bihar. The most serious is Gujarat which has received less than 30 per cent of its normal rainfall so that almost the whole State is declared a drought stricken area, its kharif crop estimates are 15 lakh

tonnes against a target of 34 lakh tonnes and involving the whole country in a serious oil seeds shortage. Gujarat and Maharashtra which are the major groundnut producers have lost a major part of the crop, while in Tamil Nadu, Karnataka, Punjab, UP and Haryana the production will be normal. Against last year's 56–58 lakh tonnes, there will be a sizable shortfall this year. Tillage in UP and Rajasthan has not been affected, soyabeans in MP is at last year's level and castor and sunflower in Andhra Pradesh are doing well. It is the state of the kharif crop in Punjab and Haryana—the granary of the country—which is most worrisome. Both states have suffered because of no rains for over a month, shortage and high cost of chemical fertilisers, power scarcity due to the slump in the Bhakra complex referred to earlier which made the operation of the 4,25,000 pump sets in Punjab and 1,30,000 in Haryana impossible, and the shortage of diesel which hit both the pumpsets as alternative fuel and the mechanised farms with 40,000 tractors in the Punjab and 20,000 in Haryana. As a result Punjab which expected a kharif crop of 22.5 lakh tonnes including 9 lakh tonnes of rice and was expected to contribute 9 lakh tonnes to the central pool does not expect to provide more than 6 lakh tonnes, as its total production will not exceed 12 lakh tonnes. Instead of 9 lakh tonnes of maize, it will realise less than 7 lakh tonnes and will have a shortfall of 40 per cent in Bajra. Haryana which had aimed at producing 6 lakh tonnes of rice over 2.25 lakh hectares will not exceed 3 lakh tonnes over 1.85 lakh hectares. Its kharif losses are estimated at Rs. 15-20 crores. Rajasthan reports damage to 80 per cent of its kharif crop. It is against this sombre background that the conference of Chief Ministers on kharif procurement and price policy met with the Prime Minister and the Union Minister of Agriculture in mid September. As noted earlier, it did not decide the main issue namely, the procurement price of rice. There was the usual pull from Punjab and Haryana for a price of Rs. 100 per quintal, against last year's Rs. 70, with Kerala alone advocating the APC price of Rs. 74 to avoid inflationary pressures. The other States recommended Rs. 85. The Union Government decided in early October that the procurement price of kharif paddy will be Rs. 74 per quintal. The Conference also decided to allow the three systems of procurement levy on millers, levy on producers and levy on both millers and the producers to continue. On coarse grains, opinion was divided with States of the Tamil Nadu and Karnataka recommending restoration of single state zones, while deficit States wanted no restrictions on countrywide movement. The Union government decided to maintain the procurement of coarse grains with the price of Rs. 74 per quintal. The Union Minister stated that though the supplementary budget provided for 8 million tonnes for the public distribution system, the government had decided to issue 10 million tonnes through the system. If this is so, imports of food grains will have to be 5 to 6 million tonnes at least as procurement is unlikely to reach last year's 5 million tonnes The government is also in a dilemma over the jute price which went up to Rs. 180 per quintal (against the normal Rs. 126), as a low price may divert jute lands already falling to paddy cultivation and a high price makes jute products non-competitive in the foreign market. In any case, given the shortfall in production there will have to be imports from Bangla Desh. On the flood damage, the government has set up a Flood Control Commission to evaluate the present flood control measures and prepare a long term plan for integrated and co-ordinated flood control. In the midst of this depressing picture, the Union ministry of agriculture released five new

wheat strains - HD 2009 high yielder and rust resistant for high fertility irrigated areas, HD 1981, brown rust resistant for low fertility dry land areas, Raj 111 rust resistant suited to high fertility irrigated areas of MP and UP, HI-385 for dry areas in MP and HS 1138-6-4 rust resistant high yielder for Himachal Pradesh. It is hoped that the rabi crop with adequate power and water will restore some of the kharif losses with these strains.

Exports: The increasing trend of export earnings noted in the last issue continued. For the first four months April-July the export earnings rose by 44 5 per cent to Rs 954 crores compared to the first four months of last year. However imports during the first 3 months increased faster by 53 per cent, raising the question of the extent of the trade gap for the year. The U.N. estimate presented in its document of the 30 most seriously affected countries is that our trade deficit will be Rs. 615 crores for 1974 and Rs. 870 crores for 1975. The Union Cabinet computes the gap at Rs. 700 crores. The last issue (Vol IV page 589) computed a figure of Rs. 700 crores which will involve dipping into our reserves or resorting to IMF's oil facility. The imports may have to be stepped up not only to keep the production machine moving but also as a counter inflationary force. The make up of our rising exports are sugar which accounted for 1/6 of the 4 month increase of Rs. 293 crores. In addition to the 4 lakh tonnes from the levy quota, sugar mills have offered 1 lakh tonnes from the free sale, which will mean that the aggregate sugar export earnings for the year will be Rs. 285 crores. The danger here is that the boom conditions are levelling off in this and other goods, so that next year's trade gap might be even larger. Another expanding export item is cotton textiles which in August was Rs. 39.29 crores which was double the July export, with cotton piecegoods apparel and yarn earning Rs. 110.7 crores for the first 4 months against the target of Rs. 225 crores. Oil seeds which earned Rs. 200 crores last year are also expanding. Electrical power machinery exports have increased by 40 per cent, engineering exports by Rs. 21 crores, black pepper to Rs. 20 crores for the year, with some fall in exports of sports goods and gems and jewellery by 12-15 per cent. Cashew exports have increased by 50 per cent mainly due to higher prices and steel exports are expected to earn Rs. 100 crores, particularly in bars, rods and rails which are in surplus along with first exports in Bitumen and Naphtha for Rs. 130 crores. Further India's participation in trade fairs in Berlin, Zambia, Sofia and Paris is resulting in increasing export orders for leather goods, bicycles, tractors, diesel engines. ceramics and engineering goods. India's export to ECM at Rs. 507 crores last year makes the community India's largest trading unit (25 per cent). The five year trade agreement with Iran for export of 1 million tonnes of cement, large amounts of sugar and 1,30,000 railway tracts in exchange for petro-chemical products will boost export but at the cost of goods in short supply. The five year agreement with Roumania for an expansion of trade to Rs. 120 crores, exporting 13 million tonnes of iron ore and importing 1.5 million tonnes of fertilisers and oil field equipment as well as the iron ore agreement with Japan to export 2.2 million tonnes at a 30 per cent higher price and the annual export of 1.8 million tonnes of pellets earning Rs. 40 crores are moves with long term export effects. The ore exporting countries—India, Venezuela and Nigeria—agreed in Delhi in September on means of regulating ore prices, an agreement which is to be ratified in November in Geneva and should be followed by similar agreement on tea and leather goods. STC's export incentive scheme will help in

expanding production in export oriented units.

Aid: Foreign aid in the first half of this financial year amounted to Rs. 515 crores against Rs. 1,120 crores pledged for the year by the consortium (See Vol. IV page 489). In September three agreements were signed. The agreement with UK was for Rs. 56.9 crores (£ 30 million) on very soft terms for purchase of raw materials, and components for agriculture and industry. The agreement with Denmark was for Rs. 6.7 crores (50 million Danish kroners) also on soft terms for import of machinery for fertilisers, petrochemicals and rubber industries and electronic equipment. Sweden provided Rs. 13 lakhs as a grant to export promotion (0.3 million S. kroners). Sweden has also provided for an aid of $ 46 million in 1975-76, which makes India the largest recipient of Swedish aid. The World Bank's annual report shows India as the largest beneficiary of bank finance for the year ending June 1974 at $ 442 millions, of which $ 390 million was from IDA in fields ranging from dairy, agricultural credit and marketing, area development urban development to fertilisers and railways.

International :

Bangla Desh: Bangla Desh's flood havoc referred to in the last issue is being attended by the government as a priority. India has sanctioned a special credit of Rs. 10 crores to finance its urgent imports. Jute production which registered high progress in 1972, began falling from an increased 138 per cent to 11 per cent in 1973 mainly because of labour problems, power shortage and transport bottle necks. With the EEC agreement providing a 40 per cent tariff reduction, there is need for Bangla Desh to get back to a high rate of production, accounting as it does for 18 per cent of world jute output and 20 per cent of world loomage. It is the major (80 per cent) foreign exchange earner. India has also concluded an agreement with it in September to provide 50 more coaches at a cost of Rs. 3.5 crores, making a total of 550 railway coaches to be supplied at a cost of Rs. 8.5 crores—from the Rs. 25 crores commercial credit extended by IDB, whose currency has been extended for a further year to September 1975. The unsatisfactory element in India's relations with Bangla Desh is with regard to the Farakka barrage due to be commissioned this year. It is clear that the Ganga cannot supply the Calcutta port needs of 40,000 cusecs during the lean season as well as Bangla Desh's requirements of 55,000 cusecs—as the total lean period flow is 55,000 cusecs. India's suggestion to meet this difficulty by linking the Brahmaputra and Ganga is not fair to Bangla Desh as it will take years and will be cutting into its development programmes. India will have to modify its demands on the Ganga water.

World Monetary Reform: The Annual report of IMF for 1973-74 summarises the decisions of the committee of 20 (See Vol. IV page 490) on monetary reform, the decisions of the executive directors concerning the interim committee, the guidelines for management of floating rates, the interim valuation of interest rate of SDRs and the oil facility. It also reports on the new procedures for special consultation with countries whose external policies are of major importance. It calls attention to the sound international reserves position at the beginning of the year against the background of the realignment of parities and wide adoption of floating rates, the fluctuations in gold prices and the serious changes in balance of payments position resulting from the oil crisis. Against the backdrop of continuing inflation and falling GNP, it warns the developed countries of the very

real threat of inflation. **The annual conference of the Fund is not likely to do anything beyond approving the recommendations of the committee of 20 and the executive Director's decisions.** It can however shape more realistically the terms of reference of the future committee. The industrial countries' Central Bank Governors met in early September in preparation of the IMF meeting and decided to exchange information on the operations of private banks on Euro-currencies, tighten national regulations covering forward operations and provide aid to private banks facing short term liquidity problems. The most urgent action that they should undertake is to hold back their inflation without decreasing world trade,

OPEC and the oil crisis : The mid September meeting of OPEC decided to maintain the posted price of petroleum till the end of the year but increased royalties and taxes paid by the international companies by 3.5 per cent. This means that the average cost of petroleum has been increased from $ 9.41 to 9.74 per barrel, involving an additional payment of $ 3000 million by the oil importing countries as the companies will pass on the additional charge to consumers. As of June 1974 the OPEC States reserves in hard currency had increased to $ 24 billion which by June 1975 will increase to $ 60 billion. This is off-set by a sharp fall in the reserves of all other countries except West Germany, and unless recycled will lead to a further world monetary crisis. Countervailing measures have started with the $ 3 billion IMF oil facility provided by the OPEC States, the constitution of a $ 1 billion Special Fund by the OPEC Arab States for development of the Arab world and various bilateral credit agreements with countries like India, Pakistan and Bangla Desh. The energy co-ordination group set by the Washington conference of 12 developed countries, the ECM except France, US, Japan and Canada (See Vol IV page 283) arrived in late September at an agreement to share their oil supplies in periods of crisis such as that experienced during the 1973 oil embargo. Further the U.S in the U.N. General Assembly in September has warned OPEC of the disastrous consequences of the rise in oil prices and called for a lowering of prices. The oil producing countries reacted negatively and somewhat violently to these suggestions. The Common-Wealth Conference of Finance Ministers meeting in Ottawa also in September and the World Bank President at the Annual meeting of the Bank called for co-operation and negotiation between the two groups of countries in regard to difficulties posed by the oil price rise. The only way out is, as suggested by the U.N. special Assembly in April, for a comprehensive negotiation on prices of all commodities to stay the accelerating rate of inflation of capital and consumer goods and oil.

World Economy and Development Aid' The IMF annual report warning of a world recession has been noted earlier. The annual report of the World Bank 1973-74 forecasts economic stagnation for the developing world upto 1980, mainly because they will need as additional external capital $ 2,600 million in 1974 and $ 6,800 million in 1975, after using up their reserves and the IMF oil facility. These capital needs will rise to $ 10,600 million in 1976 and $ 27,500 million in 1980, according to the report, about one third of which will have to be on very soft terms. These additional capital flows into the developing countries are needed both to meet their balance of payments deficits and to help them adjust to higher energy, food, fertiliser and basic commodity costs, the floating exchanges, and the slow down, if not recession, in the growth rates of

industrialised countries. The need for massive capital flows into the ecomomies of the poorest countries, that is with a per capita income of less than $ 200 is emphasised, if the receding second decade target of 6 per cent growth is not to be completely abandoned. For its part, the Bank is increasing its aid to these countries which in 1974 amounted to $ 1,331 million and calls on the developing countries as it did in its last annual report (See Vol. IV page 431) to concentrate their efforts on improving the condition of the poor majority in their countries through rural development, aid to the landless and small farmers, land reform, nutrition to the vulnerable sections, education and population control. In regard to the Emergency Programme for the most seriously affected economies launched by the Secretary-General following the decision of the UN special Assembly in April (See Vol IV page 491), as at the start of September against the one year target of $ 1,000 only $ 4,000 million from Iceland and $ 30 million from Venezuela have been received. Algeria has pledged $ 20 million and ECM $ 500 million though there are still procedural wrangles within the Community and demands for matching contributions by other developed and oil producing countries which are still unresolved.

World Food : World wheat production for 1973-74 which in early September was estimated by the International Wheat Council at 360.5 million tonnes and food grains at 585.3 million tonnes was, because of the 10 per cent lower Canadian and Soviet crops, revised downwards to 334.4 million tonnes of wheat and 581.8 million tonnes of food grain. This means that the export surplus of the 5 major wheat exporting countries will be the same as for 1972-73. The export demand, taking into account India's drought situation, is now estimated at 57.5-60.5 million tonnes against an export availability of 56-65.5 million tonnes. Against this background, the November UN Food Conference preparations include a proposal to create a five billion dollar annual fund to finance agricultural development and a one billion dollar fertiliser fund to meet the fertiliser shortage faced by developing countries. Another issue posed for the conference is the small amount ($ 236 million) spent by developing countries on R & D in agriculture compared to the $ 1,324 million spent by developed countries and a target of doubling the former's, R & D is suggested. There is also the problem of the inefficient use of the world's irrigation resources, which are being used only up to 50 per cent. Improvement and rehabilitation of the irrigation systems can increase crop yield by one tonne per hectare in the 70 million hectares used by developing countries for cereal production, which will mean an increase of world food by 70 million tonnes. In addition, new irrigation programmes can bring 23 million hectares under cultivation over a period of 11 years at a cost of $ 3,500 a year. The attainment of these land and water development goals will cost $ 9,000 million a year involving $ 3,000 million foreign exchange. These estimates back up the proposal for the $ 5 billion annual fund. A positive note here is the pledge of the US President in the UN General Assembly that the US will join in an international effort to establish an international system of food reserves, the US increasing its food aid to needy countries. For this year, the US is providing $ 1 35 billion in food aid.

World Trade: The reports on international trade by GATT, IFC and the IMF agree that the growing volume of international trade in the first half of 1974

is not continuing into the second half. In fact the buoyancy and dynamism of the developed countries' trade at 10 per cent growth in that period cushioned the shock of the rise in oil prices. But the rate has now slowed down to around 6 per cent so that for the year as a whole it is unlikely to be more than 7–8 per cent. For the developing countries also, the terms of trade which improved by 6–7 per cent and reserves by $ 8 billion in 1973, 1974 recorded a sharp decline in the reserves of non oil producing countries, and a deterioration of their terms of trade. The IFC report computes that the prices of imported manufactures into these countries were rising twice as fast as the average rate of the domestic inflation of the developed countries, which added to the spurt in oil prices, increased their import bill sizably and worsened their terms of trade. It calls attention to important changes in international demand—supply balance for certain commodities, the rising costs of long term supply and increasing demand for basic goods which must be taken into account in future patterns of world trade.

* * * * * *

II Agricultural Development

Paddy:

As forecast in the last issue (Vol. IV page 593), a good kuruvai crop over 15 lakh acres began to be harvested from the middle of September. Kuruvai in Thanjavur had been sown with karuna and IR-20 and in the Gobi area with IR-20, Bhavani as well as a new strain, 8946, which has a shorter 105 day duration. Kuruvai rice has been averaging 2 tonnes per acre. The effect on rice prices starting in Thanjavur has been downward from mid September, as the kuruvai paddy came on the market, at Rs. 62.65 per bag of 57 kg while the old stock of CO-25 was selling at Rs. 95 per bag. To deal with the availability and price situation for the coming months, the State governments revised in early September its procurement policy for kuruvai with a view to procuring 3 lakh tonnes of rice (against 91,000 tonnes rice procured last year) and so keeping prices down and moving stocks to needy and deficit areas. Under the new system published in the Gazette as the Tamil Nadu (procurement by levy) Order under the Essential Commodities Act: (a) a procurement levy on producers (land owners and tenants) in all districts except Thanjavur is imposed: (b) the levy is set forth for each district separately—Kanyakumari, Tirunelveli, Madurai, Coimbatore, South Arcot, Tiruchi, Chingleput and North Arcot and varies according to the size of the cultivated land and in the case of Tiruchi and South Arcot in accordance with the minor or major or canal irrigation used. In general, the detailed and specific levies, exempting all lands cultivated under one acre, range from 5 quintals per acre per crop up to 2.5 acres to 7 quintals per every acre above 2.5 acres (c) for Thanjavur purchases are to be made directly from producers as in the past but on a more

thorough and intense scale: (d) restrictions on movement of paddy within the State and in each of the districts referred to above which has been declared a specified area under the Paddy and Rice Movement Control Order, movement has been banned except under the authority of the State Civil Supplies Corporation. Check posts have been revived in Thanjavur and all other districts to check the movement of rice or paddy across the borders without permit. In addition every district has been asked to prepare a food budget balancing its production of all food grains against its consumption needs. Any resulting deficit in any district will be met by moving surplus stocks and all movements must be in accordance with the prescribed description. The district collector is the administrator of the budget, which should result in more precise information on food grains production and the demands for the State as a whole. The Union Government's decision on the procurement price of Rs. 74 per quintal for coarse varieties was made after the kuruvai harvest in this State.

Other crops :

September reports of the groundnut crop in the Pollachi region and cholam in Koilpatti were satisfactory. Topioca cultivation, plans of which were reported in Vol. IV pages 494 and 547, is being extensively grown in the Coimbatore district, with an output of 20 to 25 tonnes per acre. Apart from its use for the tapioca based industries in the district and State, it can supplement the coarse grains supply in the State which will be inadequate with its free movement outside the State being authorised. Potato cultivation is spreading in the Madurai district in addition to the revived crop in the Nilgiris, where new varieties of cabbages and carrots are being grown, with seeds obtained from NSC.

Research results :

A new short term paddy variety, pusa 33, which is a basmati variety is now ready to be grown extensively in the State. It is a 100 day crop with a 65 per cent head recovery and 58 per cent milling percentage and because of its economic water use can be grown in all seasons and makes up for its relatively small yield (2 tonnes per acre) compared to other HYV by its countrywide and international demand. It has been successfully tried out in one farm and is ready for use in Thanjavur in the next kuruvai season. Another development is the 3 new varieties of paddy—satya, surya and suhasini—successfully tried in Maharashtra, Andhra Pradesh and Kerala and grown experimentally at the Coimbatore research station where their yield averaged 60 quintals per hectare much larger than that of IR-8 or Jaya. These varieties should be further adopted to conditions in this State, as the Maharashtra yield was as high as 125 quintals per hectare. In regard to cash crops, the new variety of cotton, suvin, (See Vol I No. 8 pages 3 and 4) which is a long staple variety which yields 15 quintals per hectare and can spin upto 100s has become popular in this State. The department is therefore multiplying both suvin and CBS-156 (another long staple cotton) seeds over 12 acres to meet the demand of cotton growers. Another very important crop in view of the soaring prices of edible oil and the failure of the groundnut crop in Gujarat is sunflower which so far has not done well in this State, with low germination, poor seeds, chaffy grains, erratic yields and low oil recovery. There is a need for further research on sunflower seeds and varieties suited to the heavy black cotton soils of this State. The existing variety EC 68415 grown in Madurai, Salem, Ramanathapuram and Coimbatore, with its average 40 per cent oil content needs to be further adapted to increase yield and

oil bearing similar to EC 69874 being grown in Central India.

Co-operative and Land Development Banks:

The record of the State in the field of co-operative credit and land development banks (See Vol. IV page 548) is good. The percentage of overdues to loans of the primary societies which is 44 on an all India basis is 28 in this State, being the second lowest though still high. In the case of Central Co-operative Banks against the all India overdues percentage of 36, the Tamil Nadu percentage is the lowest at 9. For the State Co-operative Banks the all India percentage is 6.9 and the Tamil Nadu percentage is 0.3 which it shares as the lowest with Haryana. Reviewing the Country situation where primary societies' overdues have amounted to a huge Rs. 377 crores on June 30, 1972 (against Rs. 171 crores on June 30, 1968) the Datey committee points to the lack of discipline among farmers in repaying loans, the defective lending policies and the State governments' lenient attitude towards defaulting as the main causes. It also demonstrates that there is no relation between good irrigation and HYV crops and prompt repayments, that both large and small farmers are equally involved in the overdues and that a full time secretary ensures repayments. It recommends superseding the Board of Directors of continuously erring units, legislation to authorise Registrars to recover dues, forming State Farming Corporations to purchase and sell lands of those who are in serious debt, legislation also to require of those who have taken loans, permission of the society to sell their produce and the mandies to repay the loans directly to the societies and co-ordination between credit and marketing societies. The State governments, particularly the 12 States whose overdue percentage is above 45, must with the help of RBI act on these recommendations. Similarly the sound record of the Land Development Banks in this State is indicated in its annual profit for 1973-74 having doubled over 3 years from Rs. 70 lakhs in 1970-71 to Rs. 1.5 crores in 1973-74 and its administrative cost being a low 0.7 per cent. This is due to professionalisation and sound management techniques of the banks; loans are production oriented (the additional income generated by the loan) not security based, but based on recommendations of the ground water cell resulting in widespread ground water exploitation, use of objective criteria, such as tried and wise norms determined by technical staff on the basis of production costs and income accruals, speedy utilisation of loans which are released in instalments related to uses and seasonality, and periodic checking and help in the use of loans by the bank technicians. The system is now setting up a fund to help farmers who are in difficulty to in re-scheduling their loans. There are problems of the future function of this excellent system referred to in Vol. IV page 548 to which the government should now turn its attention and build on the sound infrastructure that has been developed.

Dairy Farming:

Dairy farming in the State will be helped by two developments. In early September, the Madras Veterinary College which has the only frozen semen bank in the Country, inaugurated the Mobile Artificial Insemination Unit under which insemination of milch cattle with frozen semen of high quality is being made available at the homes of cattle owners. It has been difficult even for city owners to go to the Artificial Insemination Centre at the college and it has been completely outside the reach of those living in the mofussil. The unit can service Madras and its neigh-

bourhoods at the rate of 6,000 inseminations a month in place of the current 600. Now this facility should be extended to the rest of the State by establishing centres at Tiruchi and Coimbatore to start with, from which mobile units can service those districts. The stored semen is from New Zealand milch cattle which have a genetic potential of 12 litres per day. The Department of Agriculture should provide the small funds needed for this essential service. The other essential is cattle fodder which is needed for the improved breeds and of which we produce only 1/3 in green fodder, 1/7 of the feed concentrates and 1/4 of the needed crop residues. As a result of the experiments carried out at Alamadhi, the regional research station in this State and the research stations in 7 other States, it is now possible for us to produce the superior varieties of sorghum, oats, cowpeas, guar and the high yielding grasses with 15 per cent protein to feed adequately the improved strain of the milch cattle which is developing.

Tea, Coffee and Rubber :

Following tea production statistics set forth in Vol IV page 549, the government reports that for the first four months of this financial year – April to July – production increased to 225 million kg compared to 204 million kgs in the comparable period last year. Exports increased from 68 million kgs to 80 million kgs in the same period. The Chairman of the State Planters Association however warns that this increasing production trend cannot be kept up unless fertilisers are available in adequate amounts to the tea industry. Another trend noted by him and the foreign market observers is that the rising tea prices in London, Calcutta, and Cochin (referred to in the last issue Vol IV page 595) seem to be faltering, mainly because the world production of tea is expanding. While the Kenya production for the first six months fell by 8 million tonnes, Sri Lanka remained steady and Indian production increased by 20.5 million tonnes alongside of increases expected from Indonesia. There is need therefore for the promotional activities of the Tea Development Corporation and the Tea Board in UK, Europe and the US to be vigorously pursued and for the government to reach early agreement with Sri Lanka, Kenya and Indonesia on the international price structure as the ore producing countries have done. In coffee the government has asked for an export quota for 1974 of 52,000 tonnes, which is the same as that for 1973 and is arranging this level of exports. The international coffee agreement without quota restrictions has been extended till May 1975. In rubber there is a curious situation. The world price is Rs. 4,500 per tonne, the government notified price is Rs. 5,200 per tonne but the market price is Rs. 9,500 leading to closing down or cutting back of production in rubber industries. The government is importing 8,000 tonnes of synthetic rubber and with natural rubber production in the Country picking up, the internal price must decline if the internal demand for rubber goods and the export target of Rs. 12 crores are to be met.

* * * *

III Industrial Development

Salem and Vizag:

In addition to slowing down the Salem Plant schedule implied in restricting its allocation for this year to Rs. 3 crores (See last issue, Vol IV page 596), the Union Government announced in September that the steel plant at Vishakhapatinam is to be constructed over the next 15 years and not even within the overly long 7 year original time schedule. What the plan for Vijayanagar is, remains to be seen but it is clear that both technical and political forces are leading to a downgrading of the 3 Southern plants. Technically the resources are not available in view of the commitments to expand Bhilai and Bokaro and the modernisation of TISCO and IISCO. Politically, the South's pull is weak in the location of major units.

Neyveli:

Another curious development was the September announcement of the Union Planning Commission and the Union Ministry of Finance that the cost of the approved expansion of the production from the existing mine from an annual production of 3.5 million tonnes to 6.5 million tonnes was not Rs. 36 crores (See Vol IV page 370) which had been allotted but Rs. 61 crores. On enquiry by the Ministry of Mines, the Planning Commission stated that the revised figure was based on the increased cost of West German equipment. It was found that there was no basis for making calculations on the imported equipment costs as the international tenders were yet to be opened and additionally there had been an error in the calculation of Deutsch marks to rupees. This figure floating is inadmissible in regard to a major power project of the Country. The State government is proceeding with arrangements for Larsen and Toubro and its foreign collaborators to manufacture the mining machinery required by Neyveli's expansion and the second mine cut. The position with regard to the second mine cut with an annual capacity of 7 million tonnes costing Rs. 107.85 crores and the related 1,000 MW power station costing Rs. 200 crores is not clear. The Chief of the project appraisal division of the Union Planning Commission visited Neyveli in September to study the two projects. It was explained to him that if approved now by the commission and cleared by PIB and Union Cabinet, the detailed project report and lay out plans could be readied by March 1975, when equipment could be ordered and the first system of equipment erected by 1977, lignite production start in January 1978 and the power station phased to synchronise with the production of the second mine. A decision on these two projects is expected in October.

Hindustan Photo Films:

The performance of Hindustan Photo Films for 1973-74 is somewhat encouraging. Its annual report records a smaller loss, loss by Rs. 24 lakhs over the previous year and in the last quarter the loss was Rs 8 lakhs. Its production was Rs. 7.57 crores and sales 7.83 crores, adding upto an aggregate of Rs. 2.73 crores since its establishment. Its repayment on past borrowings is heavy and makes for the loss statement. There is need for early approval of its expansion programmes and restructuring its capital structure and debt equity ratio. Its technological and managerial capabilities show signs of improvement.

TANSI and small industries:

With the collaboration of HMT, the Tamil Nadu Small Industries Corporation

is taking up the manufacture of a wide range of drilling equipment. HMT which is moving to production of more sophisticated machine tools and a doubling of turnover is turning over the production of bench drills, column drills, gang drills and hacksaws to other units. This project will be on limes similar to the QUETCOS project in Quilon for the fabrication of LT-20 lathes. The review of the State's small scale industries by the Association's annual conference in early September in Coimbatore, highlighted the problems of shortage of raw materials, the defects in the distribution of iron and steel to small industries, the delays involved in the licensing system and the effects of the credit squeeze. Some of the areas of action needed by the small sector are assistance by TIIC, SIDCO and SIPCOT to entrepreneurs to hire purchase machinery, effective distribution of potassium chloride and red phosphorous to the match industry, opening of State offices in Calcutta and Delhi to obtain a fair share of steel from JPC, and more adequate bank credit. To help R & D in small industries, the Union ministry of Industrial Development has set up a State R & D committee with the co-ordination director of CSIR, Adyar, as Chairman.

Madras Refineries:

Madras Refineries is undertaking a Rs 20 crores expansion plan which will increase its crude processing capacity from 2.5 million tonnes to 3.5 million tonnes, its lube production from 2 lakh tonnes to 2.7 lakh tonnes and a new paraffin wax plant with 20,000 tonnes capacity. The finances for the expansion are internally generated funds, with foreign exchange from the Iranian credit. It will be recalled (Vol. III page 260) that against the capacity of 2.5 million tonnes, it processed 2.6 million tonnes last year and despite the 3 weeks maintenance slow down this year, will process 2.5 million tonnes under the revised product pattern, cutting back on petroleum by 25 per cent and increasing the production of middle distillates, which will fund the expansion. On the basis of the optimisation studies underway, the expanded production will start in 1978.

Sugar:

Four of the seven co-operative sugar mills in the State will be paying 25 per cent more than the cane price fixed for the season referred to under the National section. Ambur will pay Rs. 125 per tonne and 3 others will pay between Rs. 105.30 and Rs. 115.30 per tonne. The three other mills which are not doing so well will continue to pay Rs. 95.30 per tonne. The cane price of these mills is fixed on the basis of gross profits minus expenditure, 9 per cent dividend, Rs. 2 per quintal and tax liability. This means around 85 per cent of the net profit is distributed to cane growers on a pro-rata basis. The capacity of the two Kothari sugar factories—2,000 tonnes a day in Tiruchi, 1,500 tonnes a day at Sirugappa—are being doubled by 1976-77 to crush 11 to 14 lakh tonnes to produce one lakh tonnes of sugar. After the expansion, the export of sugar will be trebled from the current Rs. 2 crores to Rs. 6.7 crores.

TI group and India Pistons:

The Tube Investment group and India Pistons, both celebrating their silver jubliee in September, announced expansion plans. For Tube Investments, cycle production will expand from 5 lakhs to 7 lakhs, tubes from 1,80,000 tonnes, to 3,00,000 tonnes, cold rolled metal strips from 30,000 to 50,000 tonnes, industrial chains from 1.5 million feet to 2.8 million feet (already achieved) and a doubling of cycle chains to 2 million numbers. It

will also further promote ancillaries and plans to increase the units in the Ambattur Estate from 20 to 30. India Pistons which meets 60 per cent of the country's auto requirements and 50 per cent of replacements will be increasing its production capacity by 300 per cent, becoming self sufficient by the end of the Fifth Plan and exporting piston assemblies and cylinder lines. These are two units in the private sector with a sound record of productivity.

Borax, Lamps and Ceramics :

Southern Borax a joint sector unit with TIDCO is setting up a plant to manufacture borax and boric acid at Ponneri. The plant indigenously fabricated with the help of IIT Guindy, has a capacity of 15,000 tonnes of borax, 3,000 tonnes of boric acid per annum aud quantities of micro-nutrients, weedicides, herbicides, insecticides and detergents. The total cost of the projects is Rs. 94 lakhs, Rs. 19.6 lakhs of which is being raised from the capital market. This is the second company in the country (the first is in Bombay) to meet a growing and pressing demand for the product. The electric lamp manufacturing units in the State are facing a sizable decline in demand due to high prices, resulting in idle capacity particularly of small and medium units. Against a production capacity of 180 million lamps, demand has fallen to 130 million and the idle capacity will be increased when the 40 new licenses producing 20 million lamps becomes operational. There is need to examine the cost and tax structure in this case as a means of reviving the demand. The Tamil Nadu Ceramics Ltd., inaugurated in late September is planning to open 2 more centres similar to the ceramics units at Omalur and Virudhachalam. A Rs. 35 lakh salt glazed stoneware pipe unit to produce 12,000 pipes is being set up in Kadambathur. There is growing internal and external demand for ceramics, particularly crockery items whose exports last year was 58.39 lakhs.

Textiles and cement :

The future perspectives of the textile mills, both spinning and composite, are not too bright. Last year was a very profitable year, but this year the demand is beginning to slacken and with the continuous rise in input and cotton prices, the domestic market in 1975 is likely to contract further. Prices of superfine varieties have fallen by over 15 per cent, the slump being due to the low purchasing power in the hands of the consumer because of the inflationary situation. Under these conditions, the Southern mills should now take their full share in the controlled cloth scheme and the export promotion programme. Another uncertain element is the developing industrial unrest among the mill workers in Coimbatore who went on a token strike on September 26 and plan an indefinite strike from October 6 in relation to their demand for full wages during the period of lay off due to the power cut and for the supply of cheap rice. At a time when the power supply is back to normal and the mill should produce the increased controlled cloth and expanded exports, it is essential that the labour disputes be settled and absenteeism of the supervisory staff not be tolerated. The cement factories in the State which have resumed full production, faced in September a serious problem of transportation of cement to the retailers, because only 60 per cent of the needed wagons were available to them. As a result Tamil Nadu Cements with its silos full and India Cements in the same situation suspended production at a time when the permit holders are not able to obtain their cement, despite the demand being reduced by the control order. It is hoped that the wagon situation will return to normal by early October.

Yarn and Leather:

Short supply of yarn for the spinning mills in UP, Punjab, Gujarat, Haryana and Maharashtra in the opinion of the Union Commerce Ministry indicates a breakdown of the voluntary agreement and hence statuatory measures to ensure yarn to the weavers and the spinning mills are being considered. Also in regard to viscose filament yarn the negotiations between weavers and spinners have broken down and government regulation is being considered If that is so, the State Government machinery should be used to regulate the distribution. Despite the immediate problem of the leather industry outlined in past issues of the Bulletin, the Fifth Plan prospects for increasing exports from the present Rs. 150 crores a year to Rs. 380 crores and Rs 635 crores by the end of the Fifth Plan are promising. Large Leather processing plants are coming up in Coimbatore and 7 other centres, CLRI has the know-how for aiding the industry and producing exotic leather from stomach lining and intestines, the animal husbandry programme is producing more and better breed of cows, buffalows, sheep, goats, and pigs, well run abattoirs are coming up and the import of skins from Nepal, Bangla Desh, Burmah and Sri Lanka is beginning. What is needed is to help the industry to expand its leather processing and manufacturing capacity which will reduce semi-finished leather exports.

Private sector reports:

The annual reports of the Lakshmi Mills records the efforts made by the unit to encourage farmers to grow the sujata and suvin varieties, the increase in sales from Rs. 14.53 crores to Rs. 16.33 crores for 1973-74, earning a net profit of Rs. 2.63 crores and declaring a dividend of 20 per cent. Exports amounted to Rs. 90 lakhs (a fall of Rs. 11 lakhs over the previous year) which will be increased, with the plant expansion now completed.

* * * * * *

IV. Education, Science and Health

Unrest in Educational Institutions:

Of the 12 incidents of unrest and violence in educational institutions reported in September, four in UP, Bihar and MP were related to the ongoing agitation against inflation, corruption and black marketing which in Allahabad turned violent, two cases in Delhi and Madras involved attacking and injuring a Principal and a Warden because of differences with students, 3 in Delhi, Gauhati, and Chidambaram arising from unmet student demands about language of instruction, about not reporting to parents on student agitatiors, and employment with the actual closing of Annamalai University Arts and Science faculties and 3 in Bombay and Madras over disagreement with the Vice-Chancellor, Registrar and the college authorities over alleged corruption, marking of papers and student elections. One of the formal proposals made to the Central Advisory Board of Education, which was to meet in early October but stands postponed, is for the closure of all universities and colleges for one year when the students will be inducted in rural service programmes and the staff will either work with them or on university reform plans.

Educational Reform:

At the school level, the vocationalising of high school education is continuing in the State with 11 schools organising out-of-school vocational courses for the students. In mid September a second school, M.ct Muthiah Chettiar School, inaugurated a course for 20 boys in the 9th standard in motor winding and another 20 in radio engineering. Other courses in other schools awaiting funds include leather works, fishing, book printing and salesmanship. The convention in Madras of city schools' head masters in September proposed the starting of a system of autonomous schools under which a few schools will be selected and given the freedom to frame their syllabus, select their subjects, set their teaching and learning standards, and conduct their examinations. The proposed content is good but it is one which is basic to the entire school system and should be applied to all schools. If it is felt that there are risks of uneven standards, that would be much better than the present rigid, outworn and irrelevant system. On examination reform it recommended that class promotions should not be based solely on examination performance but on internal assessments at the sixth and ninth standards and the use of question banks. At the university level, the Union Education Minister in his convocation address called attention to the futility of developing job oriented education when there are no jobs for such educated persons (See Vol. IV page 502). The prior need is for the economy to become buoyant and throw up jobs which then the education system can meet. He referred to the most job oriented educational course—the BE and Polytechnic diploma where only 18,000 and 36,000 students have been admitted against an intake capacity of 25,000 and 47,500 over the past 7 years and yet 73,000 of such engineering graduates are registered in the Employment Exchanges. But he also emphasised the need for the educational system to be deeply involved in National development concerns and called attention to the fact that there is no alternative to the reform and restructuring of education. Apart from mounting student unrest, the education allocation is being continuously reduced and we must now find alternative models of learning at lower costs.

Technical Education:

On September 10, the first agricultural polytechnic in the Country was opened in Pondicherry under the auspices of the Tamil Nadu Agricultural University. As pointed out in Vol. III page 653 there is need for opening several such polytechnics in the State for training middle level agricultural technicians and for training secondary level agricultural teachers. In television engineering, IIT, Guindy is starting from the next academic year a one year post graduate course in television technology with a view to training 20 such engineers a year. Its research programmes are extended to include transmission losses suffered by the State Electricity Board, an ocean engineering centre to help in off-shore exploration, a space science centre and the setting up of remote communications terminals for its computer centre in Sriharikota and Kalpakkam. In light of the T. V. service being set up in the State from April next year, the Technical Teacher Training college at Adyar started in September a five month T. V. service and maintenance course for radio supervisors of the State Rural Development programme Also the Institute of Film Technology Adyar has started a course in Television Mechanics as part of its programme, with the help of cameras and recording equipment worth Rs. 6 lakhs in foreign exchange provided by the Union Government.

Science Research:

The SITE programme due to start in July 1975 has been revised from its original plan of beaming programmes from Ahmedabad to 5,000 villages. It is now proposed that 2,600 villages be covered for instruction in modern agricultural practices and family planning methods through ground transmission from Amritsar and a new station in Nadiad near Ahmedabad, 2,400 villages in six States – Andhra Pradesh, Karnataka, Orissa, Madhya Pradesh, Rajasthan and Bihar—will receive programmes directly from the satellite for which a second earth station is being built in Delhi to beam AIR television programmes to re-broadcast to these villages. India will be the first country to use powerful community sets which are battery operated for receving broadcasts directly from the satellite, which is equipped with a powerful transmitter to beam signals directly to the TV sets. After the one year loan by NASA of the ATS-6 satellite, India will be launching her own satellite, on which plans include one community set for each of our 5.7 lakh villages. There is some question in the Country as to whether with the tight resources position, TV development is the most economical use of our scarce resources. The answer will depend on the economical structuring of the project, the trained personnel and programmers who are now being readied and the pay off from the agricultural and development programmes which the satellite will be broadcasting in several languages. This requires the careful and adequate preparation of soft ware, on which there is a disturbing lag. The Union government is planning to establish a national agency for using remote sensing techniques for comprehensive land survey. These techniques using satellites would enable survey of large areas with speed and precision, making known the detailed characteristics and potential of each area and contributing to optimum land use. The priority here is for the Country to train immediately qualified quantity surveyors who number today 500 and who should be 5,000 to start with. Further a new seismic method for locating oil and gas reserves in off-shore areas, called the bright spot method is being widely used in Mexico, Nigeria and Indonesia for off-shore exploration and should be adopted by our scientists to identify our off-shore oil and gas locations. At a different level, the Indian Institute of Management, Bangalore completed in September a pilot study in Coimbatore on the transportation capacity of bullock carts which serve the sugar mills there. On this basis it proposes to undertake a techno-economic feasibility study of the Country's 12 million bullock carts employing 20 million persons which was referred to in Vol IV page 6. With improved cart design and better organisation, its present freight for transportation capacity can be increased from 10,000 million tonne kms to 50,000 million tonne kms which compares favourably with 1,60,000 million tonne kms of the Rs. 4,000 crore railways investment and the 84,000 million tonne kms of trucks. Further for much of the weak and undeveloped rural roads bullock carts would be the only means of transport and as agriculture is intensified and markets developed will be an important means of augmenting our much needed rural transport. In the area of agriculture under the International section, attention was called to the urgent need for expanding agricultural R & D in developing countries. The FAO paper on this question calls attention to the imbalance in the use of agricultural technology. The developed countries with only 30 per cent of the world's arable lands are consuming 85 per cent of the world's supplies of pesticides and 75 per cent of fertilisers. Agricultural research in the developing countries needs more scientists and the losses from poor storage ranging from

5–10 per cent in cereals and 30–40 per cent in fruits and vegetables must be reduced through more work on R & D.

Health :

The first radiation plant for sterilisation of medical products has been established near BARC as a means of raising national health standards and improving surgical operations. It has potential for the preservation and pasteurisation of food stuffs, sterilisation of pharmaceutical products control of insects and improving agricultural output. The centre which is the first in Asia is also training personnel for Indonesia, Korea and Philipines. In this State the Demographic and Evaluation Cell of the State Family Planning Bureau has published two studies. The first is on the demographic characteristics of the 7,804 sterilised women in 8 districts—Madurai, Ramanathapuram, North Arcot, Tiruchi, Salem, Tirunelveli, Kanyakumari and South Arcot between June and August 1973, each sterilised woman being given Rs. 60/- as incentive plus some gifts. The achievement was 90.74 per cent, the age group of 86.38 per cent of the women was 15 to 35 years and their husbands 93.48 in the age group 15-45, 50 per cent of the women had 3 or less children and 81.9 per cent 5 or less, the average number of children of the group was 3.72, 91.86 per cent were Hindus, 4.63 per cent Muslims and 3.47 per cent Christians, 66.39 per cent were illiterate, 22.81 per cent had primary education, 8.07 middle school, 2.56 high school and 0.17 college education, 60 per cent of their husbands were literates with 7.10 and 0.73 per cent of secondary and college education, 45.6 per cent of the husbands were agriculturists and 42 per cent—labourers. 90 per cent of the women came from families with an annual income between Rs. 500–Rs. 1,500, with 72.76 per cent in the range between Rs. 500 and 1,000 and 46 per cent were motivated by the FP staff. The other study is on the vasectomy camps in 2 districts, North Arcot and Ramanathapuram, which confirms the findings of the first study with the recommendation that tubectomy camps in the districts should be conductedin the major government hospitals.

* * * * * *

V. Employment

The Annual Conference of State Labour Ministers in September (i) endorsed the proposal to provide legal aid to workers in labour litigation (ii) decided the minimum wage rates for the beedi industry (Rs. 4.5 to 5 for 1,000 beedies) and (iii) reviewed the working of the Minimum Wages Act and recommended its amendment. The 12th annual Session of State Labour Department conference also held in September in Ootacamund decided to (a) recommend to the Union Government an increase in the wage limit under the Payment of Wages Act, Workmen's Compensation Act and Industrial Disputes Act to Rs. 750 per month, (b) request the government to appoint a legal officer in the office of the Assistant Public Prosecutor in each region to aid in the execution of labour laws and prosecution of their infringement and (c) suggest the liberalising of the ex-gratia payments up to Rs. 500 for non fatal

accidents and Rs. 1,000 for fatal accidents. After over 5 years at the end of September, the final report of the Bonus Review Committee was published recommending by a majority of 5 to 2. (a) the status quo on bonus payments—a minimum of 8⅓ per cent and a maximum of 20 per cent, (b) the scope of the Bonus Act should not be widened to include government department employees and public sector undertaking workers, (c) that when the wage exceeded Rs. 1,000 per month, the bonus should be calculated on a Rs. 1,000 per month basis (previously Rs. 750) and it be extended to those drawing a salary up to Rs. 2,000 (previously Rs. 1,600) and (d) the deletion of section 34 (3) of the Act which provides for a higher bonus through collective bargaining. The workers will resent the recommendations, particularly those in the railways and public undertakings and the abolition of the right to collective bargaining in bonus matters. It is to be regretted that the worker vacancy caused by the death of one of its important members was not filled to make the report more representative.

Detailed studies of educated employment launched by the Union Government in 15 districts have been completed in 3 and the other 12 are underway with emphasis on current and prospective employment in industry and service occupations. Also 1.2 lakhs Employment Exchange registrants are being interviewed to identify the number of unemployed and the period of unemployment which the CSIR has made a first analysis (See Vol. III pages 655-659) alongside of a survey of the employment pattern of graduates, post graduates diploma holders and Ph.Ds. These surveys it is hoped will help the Union and State Governments to direct their investments and create employment for the skills available. Employment growth has been picking up 2.5 per cent in the private sector in 1972-73 and 14.7 per cent in the public sector, but not as fast as the number of workers entering the labour force which is 20 per cent per annum. It is here that intermediate technology needs to be used to the utmost. A report from Andhra Pradesh on educated unemployment reports that for 40 posts of bus conductors in September, 500 applicants including M.As, M.Scs, M.Coms and B.As, B.Scs, and B.Coms presented themselves. This may in part explain the increasing migration of our scientists and doctors to the West. 40 per cent of Indians abroad are scientists and engineers and 20 per cent medical personnel in the 16,690 registered up to June 30, 1974 in the Indians Abroad section of the National register. 44 per cent of them go to the U.S. and 30 per cent to the U.K.

* * * * * *

VI. Other Items

Indian Economic Association :

The President and Hon. Secretary sent to the members of the Executive Committee the fourth and final quarterly circular for the year concerning the activities of the Association. The International Economic Association at its 4th congress in Budapest decided to accept the invitation of Japan for its 5th congress in 1977. The Government of India was informed of this decision by the president and thanks were expressed for the generous contribution of

Rs. 5 lakhs offered by them to meet the expenses of the congress if it met in India. The President and Secretary took the final action with the approval of the Executive Committee to set up a Rs. 1 lakh Endowment Fund of which ICSSR contributed Rs. 25,000 and the Ford Foundation Rs. 50,000 on the basis of the tax exemption secured from the income tax authorities and the decision to use only the interest to finance the journal expenses. Of the 4 visiting professors invited, the programme of visits by Prof. George Skorov (USSR) to the Annual Conference and Seminar and six university centres and that of professor and Mrs. Frank Hahn (UK) to the Conference and Seminar have been finalised. The special conference number of the Journal is now under print containing 4 papers on the present state of Welfare Economics, 10 papers on price policy and 16 papers on regional economic development, together with their reviews by the 3 rapporteurs. The seminar papers are being reproduced for use of the participants by the Chairman Prof. Sarveswara Rao.

Fourth Meeting of Heads of Social Science Department:

The Fourth Meeting of the Heads of Social Science Departments of Southern Universities is to be held on December 7 and 8 under the auspices of the Southern Regional Centre of ICSSR in the seminar room of the Institute. The meeting will (a) review the problems of social science teaching and research in the universities, the work on text books in the State and English languages, and the working of the methodology courses, (b) examine the follow up decisions on the ICSSR review committee report from the last meeting and (c) plan a fourth seminar on interdisciplinary research methodology for research professors and guides during May 1975. Invitations have been accepted by Prof. Shanmugasundaram (Madras), Prof. C. T. Kurien and Prof. M. Abel (Tambaram), Prof. N. Subramanian and Prof. Gajalakshmi (Madurai), Prof. Parvathamma (Mysore), Prof. C. Paramaeswaran (Hyderabad), Prof. D. L. Narayana (Tirupathi), Prof. Pylee (Calicut), Prof. K. H. Cheluva Raju (Bangalore), Prof. Sarveswara Rao (Andhra), Prof. R. Subramaniam (Gandhigram), Prof. A. Ramaswamy (Annamalai), Profs. Meti and Gopal Sarma (Dharwar), and Prof. C. Rajagopalan (Coimbatore). Acceptances are expected from 9 more professors.

Seminar on Education of Scheduled Castes and Tribes in Tamil Nadu:

The State Government organised a seminar on September 18 in the seminar room of the institute for the government officials involved from the Departments of Social Welfare, Education, Labour, the Banks, the University and the Union Government on the ICSSR financed four volume Institute publication, the Educational problems of the Scheduled Castes and Scheduled Tribes in Tamil Nadu. The wide ranging discussion of this exhaustive study indicated the need to intensify economic development programmes for the scheduled castes and tribes to supplement the good educational effort, the need for a programme of information for these groups to inform them about the constitutional provisions, legislation and executive orders about scheduled castes and tribes and the need to de-schedule the smaller sub-castes and tribes.

Jawaharlal Nehru Youth Centre:

The Tamil Nadu branch of the Jawaharlal Nehru Youth Centre is developing its structure and programme. The need for some co-ordination of the large number of

overlapping youth organisations in the State and the Country was recognised. This centre could become an effective co-ordinating focus, with exchanges of ideas and documents and personnel among the numerous organisations. Its programme is still under discussion with some emphasis on engaging its members in rural development programmes. At a benefit performance in September for raising funds for the Centre, the young and talented artists of Kalakshetra staged a very good programme of the dances of India which was both artistically of high quality and a good purveyor of the purpose of the Centre.

Sports and Education:

The inauguration of the students union of the YMCA College of Education, Madras was the occasion for consideration of the theme, Sports and Education. The backdrop of the Country's poor sports performance of the year in cricket, in tennis, in hockey and the Asian games in Teheran was a reminder of the issues faced by this vast Country with over 50 per cent of its population below the age of 20 performing so poorly in sports. One answer would be for sports to become part of the curriculum and be an examination and assessment involving subject. The major reason for such an educational reform is not simply to promote local, national or international excellence in sports: it is because sports—apart from dance—is the only educational medium which involves the entire personality of the student participant—the integrated use of the body, mind and spirit: this complete involvement is not found in other educational media—books, films, lectures or seminar and group discussions. From the point of educational excellence there is a case for sports to be made part of the school and college curriculum.

Seminar on Inflation:

The seminar organised in mid-September by the Hindustan Chamber of Commerce, Madras on inflation brought together a body of industrialists, businessmen and economists. The consensus which emerged was that monetary restraint and demand management are necessary but inadequate to deal with soaring inflationary trends. For this the first priority is to intensify investment in agriculture and increase food grains production and to expand the supply of the manufacture of wage goods. It was also suggested that the dividend limiting law be reviewed in light of the need to increase equity capital. Programmes to counter hoarding and black money should be activated together with rationalisation of controls which give rise to black marketing. Participants also pledged themselves to follow the path of integrity, honesty and straightforwardness in their personal and professional lives.

October Development Seminar.

The paper for the October Seminar; Informal Education by Mr. S. V. Chittibabu, Director, Collegiate Education, Tamil Nadu, together with a summary of discussion on the paper at the seminar on Thursday 31 October, 1974 under the chairmanship of Dr. C. T. Kurien, Professor and Head of the Department of Economics, Madras Christian College, Tambaram, appears as the first article in this issue.

Second article:

A paper, 'Utilisation of Installed Capacity, being an analysis by the Institute of the completed questionnaires on capacity use by 13 public sector undertakings for the Institute of Public Undertakings' appears as the second article.

INFORMAL EDUCATION

BY

Mr. S. V. Chittibabu

Director, Collegiate Education, Madras.

INFORMAL EDUCATION — A NEW EDUCATIONAL STRATEGY

Introduction :

Abraham Lincoln's cousin, Dennis Hanks, appears to have been once asked by a friend of his : "How were you and Lincoln educated ?" Hanks replied : "We learned by sight, scent and hearing. We heard all that was said, and talked over the questions heard, wore them slick, greasy and threadbare." It may be surprising but yet it is true that Abraham Lincoln spent less than a year of his life "going to school," because during his time on the frontier there was no such thing as a special building for running classes, nor were there stipulated hours of learning. Life was "unified, not divided into compartments of work, study and play" so observes Albert Beveridge, one of the biographers of Abraham Lincoln. People of the community helped each other "mightily." Participation was of the essence of community living and it was needed, expected and enjoyed — not necessarily as a skilled expert, but as a social-being, as a co-operator, as a component of the community structure. Boys and men had no professional teachers to look upto. On the contrary they learnt from and with one another as a part of the natural process of becoming and being human. And they kept their eyes and ears open, talking over the events and questions of the day until "they were worn threadbare." The young went about learning the ways of the community but "learning" did not imply "memorization." It meant an intimate connection with the power of the community to do something. The young had to involve themselves in the doing and that was how they learnt.

But circumstances changed, life altered and the School System emerged and, with the result, students, removed as they were from the humanising influence of the community, came under the authoritarian rule of professional teachers who were bent on preparing their wards for certain limited roles to be played in the community as clerks or plumbers, doctors or engineers, neglecting the bigger and more important role as members of the community discharging such functions as their democratic citizenship enjoined on them. This tyranny of the School system which has now become the conventional hall-mark of what is called formal education has far too long swayed our educational thought and activity. And no wonder a campaign has been mounted of late in advanced countries for the debunking of the schooling "myth". The cry is heard for radical reform in the educational field for adopting de-schooling devices alongside of formal education and for placing due emphasis on learning experiences outside the ambit of conventional schools.

As Cole Brembeck would put it, "the new interest in informal education is an act of re-discovery." Historically schools are relatively new comers on the human

scene. The act of learning, however is as old as man himself. The very human environment has always furnished the ingredients of learning and the continuity of cultures bears ample testimony to the effectiveness with which men learn from one another. Presently we are gaining a new awareness of just how much we do learn outside the domain of formal schools and how important it is to our living and well-being. If we were to quantify the relative impacts of school and out-of-school learning, it is just possible that we may find school learning being over-shadowed by informal education in developed countries. Not that formal education has fallen from grace and has precious little to contribute to making people both literate and modern. It is not any more the one and the only talisman, as was believed once, capable of making men whole. The crucial role that the informal or non formal world of learning now plays in settings outside the formal schools has come to be realised. To quote Edmund King, "the extensive area around the school is far from empty and along any odyssey there are sirens more glamorous than any teacher whose delights need not be dangerous." The world abounds in smart men in better-paid professions. Experts of every kind know much better than the teacher. The parents may be a counter-influence of more substance than was the case before. We live in a world of cultural plurality with plenty of scope for disagreement. All this only goes to reinforce the thesis that education should be dispensed and acquired through a multiplicity of means. The stress is not any more on the path an individual has followed but on what he has learned or acquired.

The Emergence of New Trends in Education:

Educational institutions have been proliferating in recent times because of rampant population growth and they are also becoming more diversified. But then traditional structures are simultaneously shedding their complexion of formalism. The question may be asked: Are not these two trends incompatible? The answer is 'no'. For, it is not seen how less formal institutions cannot co-exist with well-knit school structures. Teaching circuits may be extended by multiplying the schools of the existing kind by setting up schools of a different kind by part-time educational programmes, and by out-of-school techniques, all of which may constitute a multi-faceted educational process. From now on there could be no objection to our acknowledging the equal validity of all these paths—whether formal or informal, institutionalised or non-institutionalised.

Formal Education — The Chinks in its Armour: –

(a) In developing countries like our own the expanding school age population coupled with diminishing resources has rendered our task of making formal education satisfy all individual, collective and social needs for education, skills and behavioural changes a Himalayan one. To make matters worse educational planning has not been imaginatively done in relation to national man-power requirements.

(b) Bureaucratic encrustations tend to stifle change because it is always easier to maintain established schools pursuing their routine programmes in a routine manner.

(c) Governmental expenditure cannot be expected to be unlimited for perpetuating traditional patterns of schooling.

(d) Transplanting educational systems from developed countries to ours without examining their relevance or otherwise in the context of our own

national non-power requirements has proved to be a costly experiment.

(e) Even if some attempt is made to revamp and re-orient the curricula of our schools and universities on elaborate lines, it is highly doubtful whether our schools and universities in the context of the present revolution of rising expectations can rise equal to the occasion and accept the stupendous challenges of to-day. The continuing rigidity of formal schooling in general cannot cope with the breath-taking changes presently taking place in the field of science and technology.

(f) Formal Education cannot cater easily for environmental differences nor meet the requirements of a variety of people clamouring for educational opportunities on grounds of equity.

(g) One single institution can hardly adjust itself to the complexity of living situations nor respond quickly to the new and surging demands of a variety of individuals, each with his own aspirations and goals.

(h) Formal education has created a chasm between two very different groups of the school-age population—one which benefits by full-time school instruction and the other unable to derive any gain from this, thereby condemned to go without it for life. This unhappy situation foils our efforts to translate into action the concept of universal primary education.

(i) In developing countries like India there has no doubt been an unprecedented educational expansion in recent years. But because it has been attempted on conventional lines, there has been a sharp rise in educational costs which have gone far beyond the figures estimated. Consequently there has been drastic fall in quality. There are substantial inequalities among regions within countries and between rural and urban areas. Inefficiencies have set in and the most awkward one is the deplorably high number of drop-outs and push-outs. Children enter schools, stay for a few years and then fade away. In developing countries, as a whole, only 30 children out of an initial 100 go through primary schooling and that too in a halting manner. Is this not a colossal wastage of our restricted resources ?

(j) By far the most serious problem, however, is the emergence of widespread employment among school-leavers. This employment problem of the educated youth appears to run the whole length of the outputs of formal education system with clusters at different levels and of varying types for different countries. This is because educational systems continue to maintain an ostrich-like attitude to the difficulties of developing economies in absorbing educated youth into productive work. The resulting tragedy is teenage idleness, discontent and unrest.

In view of the above inherent limitations, handicaps and inadequacies of formal education, fresh solutions need to be devised and designed, if future plans of educational development are not to end up on the rocks ultimately.

Informal education—The New Strategy:

To set right the shortcomings and draw backs of a monolithic educational system with its emphasis on formalism, the new trend in favour of what is called informal eduction or out-of-school education has been lauded and welcomed by all right-thinking men who have bona-fide concern for an educational transformation in tune with the fast changing social miliew. In the words of Alvin Toffler, "industrialism shatters the present day societies, splitting them up into thousands of specialised agencies—schools, corporations, government bureaus, churches, armies—each sub-

divided into smaller and still more specialised sub-units. The same fragmentation occurs at the informal level and a host of sub-cults spring up." What he seeks to point out is that it is not accidental that we witness trends towards diversity either in education or economy, in art or mass culture. These trends are symptomatic of the advance of human society to its next higher stage of differentiation.

This differentiation which is becoming inevitable necessitates our giving the present educational system a large informal orientation. And this orientation is not difficult to bring about in view of the new and wide-ranging educational resources at our disposal, such as the radio, the T. V., the cinema, pocket books, inexpensive booklets and pamphlets, maps and models, flash cards and flannel graphs, evening classes, and literacy centres, institutes for skill training and correspondence courses, apart from the more sophisticated technological devices like the computer the videotape etc. All these tools have explosive possibilities which can be channelised imaginatively for the expansion of informal learning.

The main characteristics of informal education may be summarised as follows:

(1) the diverse types of informal education do not constitute a system as such. They may be styled rather as unrelated and unco-ordinated sub-systems which co-exist with and complement and supplement the system of formal education.

(2) Methods of instruction vary—from personal confrontation between the teacher and the learning group to the use of radio and television, mobile training units, demonstrations, correspondence courses, visual aids etc.

(3) The relative emphasis on theory and practice differs in the varied programmes of informal education. So, too, the ages at which people are involved as learners, the pre-requisites for the courses, the length of courses, the timing (many being part-time) and whether classrooms are used. Almost all are based on voluntary attendance.

(4) The human factor plays a tremendously significant role in the expansion of informal education. Besides millions of teachers, there are millions of other professionals, millions of college students, millions of voluntary social workers, and even millions of intellectuals who can contribute their share of services in the cause of informal education.

(5) Investment in particular types of out-of-school education may have a more lasting impact on economic productivity and social change in the short run (for example, courses of learning while working) than is the case with formal schooling.

(6) The greater number of programmes for informal education are organised in places close to where young people and adults live and work so that they may integrate well with specific educational deficiencies within the local community. They are also likely to have a certain elasticity and flexibility, beginning when most needed and ending when no longer required, as dictated by the demands of the work process.

(7) Because of its relevance to the pressing social needs, and its proximity to the points of use, informal education makes a notable contribution to national economy and its role in passing of knowledge, creating skills, influencing personal value is by no means inconsiderable.

Informal Education—Some Misconceptions:

There is some kind of widespread opinion that informal education is for the

proletariat without any educational background or for unskilled and illiterate men and women. Then again there is the view that informal education is resorted to as a stop-gap arrangement in places where formal schooling is absent. Both these are unwarranted and misconceived. As Asher Deleon has observed, "informal education has in itself the power to correct the rigidities and discrimination inherent in the formal educational system." The crux of an educational strategy which seeks to bring within its compass both the formal and informal systems and attempt a blended approach " lies in identifying the inter-relation between all varieties of educational goals and all kinds of modalities to be used ".

Then again, informal education is not a tool that can be safely entrusted to people who have no specific knowledge and experience or professional preparation and methodological training. Many programmes of informal education have proved a fiasco because of lack of intellectual preparation, real motivation and professional training on the part of those who voluntered to undertake the task, though in good faith and with real zeal.

Let us not, therefore, fail to raise our sights and keep in perspective the essential need for systematic planning, organised preparation and continuous effort for achieving the set goals of informal education.

Informal Education — Its Potential Customers : -

A wide variety of clientele is available for the resourceful practitioners of informal education.

1. Children who have dropped out of the formal schools, mostly for socio-economic reasons.
2. These who have never been to schools for various reasons. This group would include even young persons in the age-group 15-25 years.
3. Learners who during their formal schooling feel a need for a fuller and deeper knowledge in a subject or subjects of special interest.
4. Workers in urban as well as rural areas—young labourers, small farmers, landless peasants, small entrepreneurs, road workers, all of whom in need of up-to-date knowledge germane to their job.
5. Educated but unemployed youth of varying age-groups needing to make their non-relevant education relevant to the specific skill demands of the community.
6. People in all age-groups wanting to grow professionally in keeping with the latest trends of development in their specialities. Population Education, Family Planning, Nutrition Education, Problems of Adolescence, New Scientific gadgets, New Elections, Responsible Citizenship, Aesthetics, Space Technology, Computerisation and so on—are some of the subjects or situations motivating a great number of people to update their knowledge, understandings and skills.
7. People wanting programmes for personal satisfaction, games and sports, cultural programmes, leisure time activities or hobbies, tourism, recreation etc.
8. Graduates, professionals, intellectuals, who are in continuous quest of new and fresh knowledge of informative data for keeping themselves abreast of the times.

Agencies of Informal Education : –

Informal Education depends for the implementation of its programmes on a variety of agencies.

First and foremost are the very institutions used for formal education such as primary schools, secondary schools, polytechnics, colleges, universities etc. It is very important that links with formal education are forged at every stage, as far as possible, if only because there should be no artificial dichotomy as such between formal and informal education, and informal education should be kept open for learners wishing knowledge in an informal way. Thus, for example, agricultural extension officers, handicraft specialists, industrial experts, health officers etc. may be invited to contribute to school lessons as well as run classes for the benefit of those needing informal education.

Secondly, for implementing such major developmental programmes as Integrated Nutrition Programme, High Yielding Crops Programme, Family Planning Scheme, Rural Employment Programme, Functional Literacy Programme, etc. methods of informal education have a great operational value.

Thirdly, special institutions like Nehru Yuvak Kendras set up by our Ministry of Education, Gram Shikshan Mohim as in Maharashtra, Kishore Bharti as in Maddya Pradesh etc. are effective centres helping those who wish to pursue the path of self study.

Informal Education : Its Identity with Life-long Education : –

As Unesco's latest International Report on Education, "Learning to Be" crisply remarks, "every individual should be in a position to keep learning throughout his life; the idea of life-long education is the keystone of the learning society". The life long concept, embracing, as it does, aspects of education, is rooted in the belief there is no such thing as a separate 'permanent' part of education which is not life-long. For this reason only Unesco underscores life-long education as the master concept for educational policies in the years to come for both developed and developing countries. Educational institutions and means must be so fashioned as to offer a far more deversified choice of courses of personal learning, self–teaching and self-training to every individual whatever be his age or stage of intellectual development. What is more, each person should be enabled to select his path freely in a more flexible framework without being bamboozled or bull-dozed into giving up his use of educational services for life if he leaves the system. If this crucial objective is to be achieved, informal education is the master key to the gateway of success. The organizational "spectrum" of available educational programmes and resources should range as a rule from "closed and lightly prescriptive systems to open non-prescriptive ones".

One interesting effort to facilitate access to higher education and offer greater freedom of choice is that of the University Without Walls "(UWW) in the United States and the "Open University" in the United Kingdom. The objectives of this new type of University stem from the concept that a man cannot achieve or even discover the potentiality of which he is capable unless he continues to learn and make the most of himself. Some decades ago Sir Richard Livingstone succinctly expressed the need for life-long education thus :

"What lovers of paradox we British are ! Youth studies but cannot act ; the adult must act but has no opportunity to study ; and we accept the divorce complacently.......We behave like people who should try to give their children in a week all the food they require for a year ; a

method which might seem to save time and trouble, but would not improve digestion, efficiency or health".

The point that educationists like Livingstone seek to make is that education at all levels must not get entombed within the citadels of conservatism or traditionalism. The single-point entry system should give place to the multi-point entry system so that many categories of people, such as factory workers, routine clerks, shop assistants, social workers, traders, miners, farmers, frustrated through poor schooling in their early years may have the chance of entering any institution of learning, even a University. Speaking of the Open University in the U. K., its Chancellor, Lord Crowther has this to say :

" We are open, first, as to people. Not for us the carefully regulated escalation from one educational level to the next by which the traditional Universities establish their criteria for admission...We are open, as to places. This University has no cloisters – a word meaning closed...We are open as to methods. Every new form of human communication will be examined to see how it can be used to raise and broaden the level of human understanding...We are open, finally, to ideas ..". These are words, indeed, worthy of being quoted for making out a convincing case for informal education at the University level.

Administering, Co-ordinating and Financing Informal Education :

Informal Education programmes need to be properly planned for which selected areas should be first identified and classified. Planning procedures should analyse the inter-relations among programmes of formal and informal education. "The "systems analysis" approach may be of help in performing these complex tasks.

The contributions of existing programmes and their crucial areas of impact on national development must be determined along with the dimensions of the nation's education gap. Strategies for overcoming these educational hurdles among both young persons and adults, at the work place, in the home, and in the local community must be forged so that some informal education programmes can be selected for priority attention.

Then comes the question of administering them without let or hindrance. The co-ordination of the programmes should be improved by such devices as shifting responsibility for administration from one agency to another and by improved co-ordination of educational activities at the local level. Voluntary participation in informal education should be activised and encouraged. Full administrative opportunities must be availed of in this regard to ensure that successful innovations in informal education induce desirable changes in schools and universities.

As for financing informal education programmes, the present sources of finance, public and private, for both formal and informal education must be assessed and additional sources of finance made available for giving a spurt to informal education, without affecting the funds set apart for formal education. Future responsibilities between public and private sources should be duly divided so as to avoid any clash of interests. But then, self-generating finance, made possible by heightened productivity as a consequence of the implementation of informal education programmes should be considered and wherever external help can be harnessed and exploited to advantage, there should be no let-up in our efforts.

Informal Education in Tamil Nadu—Perspective Plan :

Tamil Nadu has in recent times made history because of the far-sighted vision

with which it has got ready a Perspective Plan for 1972-84 designed for the regeneration of the State economy at an accelerated pace. The State Planning Commission's Task Force on Science, Education and Technology headed by Dr. Malcolm Adiseshiah, the famed economist-cum-educationist, in its masterly report titled "Towards a Learning Society" has, inter-alia, spotlighted the urgent need "for an integrated school and out-of-school education programme where students can enter, exit and re-enter the school, the home, and the employment market in such a way that no one will be called and maltreated as a drop-out and go without basic education on that account". The Report, as a matter of fact, has recommended a soft-pedalling of the rapid growth rate in contemporaneous educational expenditures and a re-deployment of educational resources with an accent on informal education programmes so that all those at work can have further education as they desire it and need it. This objective is to be achieved, says the Report, through a gradual merging of formal and informal education through the use of common curricula, teachers and instructors, buildings, equipment, libraries, laboratories, farms and other agencies which will provide continuing education—both general instruction and vocationa education to those who want it througl correspondence courses, evening classes the radio and television. It is fervently hoped that this innovative recommendation will be acted upon most expeditiously, thereby paving the way for a major breakthrough in our endeavours towans equalising the educational opportunities and ensuring economic and social justice for all.

Conclusion :

Informal Education needs to be given immediate attention because of the new technological systems that are uprooting the old order and ushering in fantastic social and economic transmutations. And the organisations needed to control technology will pass on from bureaucracy to, what Alvin Toffler says, Ad-hocracy, from permanence to transience and from a concern with the present to the doings of the future. In the context of the baffling challenges that the world of tomorrow is bound to pose, informal education gains a new dimension of great significance as a potential instrument for making one more adaptive and responsive in one's dealings with men and matters with a relentless drive for achieving worthwhile goals.

Bibliography

1. Alvin Toffler : "Future Shock" New York 1970
2. Asher Deleon : "Informal Education", New Delhi 1973
3. Brembeck C. S., Ed : "New Strategies for Educational Development", Toronto, 1971
4. Edmund King : "Education and Social Change", London 1966.
5. Jessup F. W., Ed. : "Life-long Learning", London 1969
6. John Bremer & Michael von Moschzister : "The School Without Walls", New York 1972.
7. State Planning Commission, Tamil Nadu : "Towards a Learning Society", Madras 1972.
8. UNESCO, Paris : "Learning to Be" New Delhi 1973.

* * * * *

Summary of Discussion

In the discussion of the paper at the Seminar held in the Seminar room of the Institute on Wednesday 30th October 1974, under the chairmanship of Dr. C. T. Kurien, Professor and Head of the department of Economics, Madras Christian College, Tambaram, the author described informal education as a new educational strategy, as an answer to the problems posed by the inadequacy of formal education. A change in outlook, so far conditioned by educational concepts, is a pre-requisite for informal education. There is a growing volume of literature on the new concepts which are being spelt out. The recognition of the right to education for every citizen, and the enormous number of students entering the formal educational system, especially in developing countries, have thrown into relief the limitations of the structure. These shortcomings are mainly a diminution of scarce resources, bureaucratic resistance to innovation and change and the unsuitability of system transplanted from a developed country which cannot be expected to provide meaningful education in the conditions to be found in India. This growing irrelevance has led to a high drop-out or push-out rate from the very groups which free formal education seeks to benefit. In this context informal education is a re-discovery. Its characteristics are its elasticity and flexibility. Informal education depends for its implementation on several agencies like institutions inclusive of the formal education structure, organisations implementing special development programmes in nutrition, family planning, HYV, Literacy etc. Further the teachers can be drawn from all walks of life, including students, housewives, technical experts and teachers to impart the skills at their command. However there are two misconceptions, namely (1) that formal education should be replaced by informal education and (2) that informal education can be carried on by anyone without training. The potential customers for informal education are the drop-outs from formal school education, those who have never been to schools, workers in rural and urban areas in need of up-to-date knowledge about their work, the educated unemployed who need re-training for employment and people in all age-groups wanting to develop their professional skills. It is life-long education which is open and non-prescriptive within reach of all those who desire it. A beginning has been made by the Gram Shikshan Mohin in Maharashtra and Kishore Bharti in Madhya Pradesh. Details of co-ordination, financing and administration have yet to be worked out. Informal education although it has gained a new dimension must co-exist with formal education.

In the ensuing discussion the paper was described as a comprehensive and excellent exposition of the concept, clientele and content of informal education. Informal education is a methodology of the re-discovery of a set of attitudes to learning skills. It organised programmes of learning out-of-school as well as spontaneous learning acquired from home, church, club, cinema, radio etc. A view was expressed that the existing formal educational methods and processes were smothering genuine learning and skill formation. The first experiment in learning programmes for drop-outs outside the school system is being organised in Madras city. It should be borne in mind that programmes of informal education should not follow the set patterns of primary education. Funds could be provided within the existing allocations using existing facilities.

The challenge is to evolve a new system of education using new techniques of learning. If the idea of informal education catches the imagination of teacher and taught it will be the answer to the need of education on a universal basis. A dissenting view was expressed regarding the use of modern equipments like cinema and T. V. which were described, in their present content, as sources of indiscipline rather than aids to learning. An exception was the use of the computers. An opinion was expressed that informal education programme would not be successful without the foundation of a soumd formal education system. A doubt was expressed whether education originated in formal structures followed by informal education and it was pointed out that atleast in the history of education in England the apprentice guilds and Trade Union classes preceded formal education. So long as a formal diploma or certificate was a basic requirement for a job, informal education would be at a disadvantage. It was suggested that instead of launching on an innovative programme, reformation of the existing systems should be considered. In this context it was pointed out that informal education should be supplementary and not in conflict with formal education even though the products of the system had to be re-trained for the demands of the employment market. Reference was made to the Aurobindo School in Pondicherry where emphasis was laid on development of faculties and it was realised that discipline flowing from voluntary choice was natural. The value of informal education for securing employment depended on official recognition for which there has to be a change in official attitude. Formal education was described as the grammar of learning and must be used as such. The trend of the discussion indicated that the new approach to learning represented by the informal education opens new dimensions to the educational crisis that we are now facing.

UTILISATION OF INSTALLED CAPACITY

AN ANALYSIS OF COMPLETED QUESTIONNAIRES FOR THE INSTITUTE OF PUBLIC UNDERTAKINGS BY THE MADRAS INSTITUTE OF DEVELOPMENT STUDIES

Coastraints on Utilisation : Factories :

1. Responses to the questionnaire on the utilisation of capacity have been received from 13 public sector enterprises :

1. Mysore Iron & Steel Limited, Bhadravathi :
2. Hindustan Photo Films, Ootacamund ;
3. Madras Fertilizers, Ennore ;
4. Madras Refineries, Ennore ;
5. Bharat Heavy Electricals, Bhopal;
6. Bharat Heavy Electricals, Tiruchy,
7. Bharat Heavy Plates & Vessels, Vishakapatnam ;
8. Chitradurga Copper Company, Bangalore ;
9. Bharat Heavy Electricals, Hyderabad ;
10. M.M.T.C., New Delhi ;
11. Hindustan Aeronautics, Bangalore;
12. Cochin Shipyard, Cochin ; and
13. Syndicate Bank, Manipal.

2. Of the 13, the Syndicate Bank and the M.M.T.C. have sent in a 'nil' reply because they are State-owned service or trading agencies. The response from Cochin Shipyard is 'nil' as they state they have yet to commence production. Hindustan Aeronautics have not replied to the question of the utilisation of capacity because they state the information is classified. They, however, offer some information on the state of the modernization of plant and equipment and on raw materials availability. Bharat Heavy Electricals, Hyderabad, have also not provided information on the utilisation of capacity because, they state : (a) their aim is "the attainment of installed capacity based on the attainment of levels of efficiency" and (b) as producers of small and medium sets, their "output and the installed capacity" are not directly comparable. This means that the following analysis is restricted to responses from the following eight undertakings :

3. Of the eight enterprises, three are producing well below capacity. Bharat Heavy Plates and Vessels 30 per cent, Chitradurga Copper 50 per cent and Hindustan Photo Films 58.42 per cent. The reasons for the non-utilisation of capacity are : (a) *Protracted Gestation Period.* In the case of Chitradurga Copper, it is the first year of production. For the Bharat Heavy Plates & Vessels, it is the third year of production. The procurement of raw materials entails lead time for the unit ; (b) *Discontinuous Demand.* The products of Bharat Heavy Plates & Vessels are of the jobbing type ; (c) *Short Supply of Raw Materials* in requisite quantities and grades of purity ; Hindustan Photo Films faces shortages of methanol and methylyne chloride even if these appear to be available in the Country. Bharat Heavy Plates and Vessels has to import 60 per cent of its requirements; (d) *Power Shortage.* Hindustan Photo Films was affected by the power cut in force in Tamil Nadu ; (e) *Delay* caused by negotiations for licensing agreements has been reported by Bharat Heavy Plates and Vessels. (f) *Poor R and D* for import substitution.

4. Of the other five undertakings, 100 per cent utilization of capacity is reported by BHEL, Tiruchirapalli; 97.2 per cent by Madras Refineries; 94 per cent by Madras Fertilizers; 90 per cent by Bharat Heavy Electricals, Bhopal and 85 per cent overall utilizaiion on an average by Mysore Iron & Steel. The causes and comments on their performance offered by the undertakings are :

A. Working Capital

5. Two undertakings report adequate fixed and working capital availability. Bharat Heavy Plates, not one among the five, also reports adequate provision by the Government of fixed capital and by the banks, of working capital. BHEL, Bhopal, calls attention to two types of difficulties faced by it in meeting working capital needs :

(i) after the despatch of equipment, payments to BHEL are kept outstanding by the Electricity Boards for long periods.

(ii) The manufacturing time-cycle extending over two to three years means that despatches are made in part and that bank credit is not available against these despatch documents during the pendency of the extended delivery. The whole arrangement has become worse with the credit squeeze.

B. Modernization

6. Two recently established firms, Madras Refieries and Madras Fertilizers, report the importance of critical selection of good process and equipment and modern plant design. In addition, Bharat Heavy plates makes the same report. In the case of Bharath Heavy Electricals, Bhopal and Tiruchi, the need for continuously modernizing and updating the facility is emphasized. Bhopal reports that its plant of ten years standing with no replacements during the last five years has lost in efficiency, making replacement urgent during the Fifth Plan.

C. Raw Materials

7. Madras Refineries and Madras Fertilisers ascribe their performanee to satisfactory availability of raw materials. Bharat Heavy Electricals, Tiruchi, calls attention to the importance of advance material planning to ensure timely procurement. Mysore Iron & Steel lists shortage of coke and scrap as its major difficulties. Bharat Heavy Electricals (Bhopal) reports its heavy reliance on imports for copper, electrical steel, big castings and forgings and the problems created by the worldwide shortages of steel and copper. The oil crisis has been a further aggravating factor. Even locally produced smaller castings, forgings and fabrication are not regularly available or on time. Due also to the difficulties they face for the raw materials and because of the power cut, Bhopal's lead time has been lengthened.

D. Transport

8. Madras Fertilizers and BHEL, Tiruchi and Bharat Heavy Plates and Vessels refer to satisfactory transport facilities for their raw materials and products. Mysore Iron and Steel reports difficulties in transport of its raw materials and the need to convert the tram-gauge tracks in their railway sidings, to metre-gauge lines. BHEL, Bhopal, faces two problems in transportation : (i) the special type wagons for freighting heavy-power transformers which are not available, and (ii) the railways are not in a position to supply these and books restrictions and quota traffic are further bottlenecks.

E. Technology Status:

9. Madras Refineries, Madras Fertilisers and BHEL, Tiruchy, report use of

recent technological designs, with Tiruchi being able to report its own special R & D efforts in this area. BHEL, Bhopal, while using advanced technology is simultaneously acquiring or developing know-how in five specialised areas. Bharat Heavy Plates & Vessels reports that it is self-sufficient for its technology except in three products for which it has collaboration agreements.

F. Spares :

10. BHEL, Tiruchi, has adequate supply of spares for its functioning as does Bharat Heavy Plates and Vessels in the case of both imported and indigenous varieties. The latter refers to the need for ensuring that spares for a minimum two year period are supplied by the manufacturers. BHEL, Bhopal, as well as Bharat Heavy Plates and Vessels refer to imported spares becoming obsolete. In the latter case, they are being replaced by indigenous items while Bhopal cites the poor quantity of indigenous spares as a reason for delay in the development of its own spare-part capacity.

G. Repair and Maintenance:

11. BHEL, both at Tiruchi and Bhopal, have a full-fledged maintenance service. Bhopal reports that some sophisticated machine tools have to be serviced by the supplier who is unable to do so because new types have been developed since. Bharat Heavy Plates and Vessels have a repair shop for the servicing of spares and for preventive maintenance.

H. Ancillary Enterprise:

12. BHEL, Tiruchi has helped actively to foster ancillary and sub-contracting units for its structurals and parts which do not take part in pressurizing operations which are sold on a captive basis to BHEL. Bhopal has similarly helped in the development of 56 ancillary units. On the other hand, Bharat Heavy Plates and Vessels points out that as its equipment is custom-built and uses only special kinds of alloys as intermediates, there is little scope for the development of ancilllary units.

I. Demand and Forecasting

13. All the enterprises report good demand with no particular need for analysis or forecasting. Madras Refineries relies on I O C for its analyses and prognoses of demand. Bharat Heavy Plates and Vessels reports 'since there is a good demand for the development of process industries" we have enough of these. BHEL, Bhopal, while pointing to the heavy demand for its products during the Fifth Plan emphasizes the need for finalization of orders by plants operated on power and by Electricity Boards at least five years in advance in order to finalise the specifications and take advance action on the procurement of necessary materials.

J. Prices

14. Three enterprises have no comments to offer on the price issue. Both BHEL, Bhopal and Bharat Heavy Plates and Vessels refer to the sale prices being fixed on the basis of (a) cost of production and (b) the landed cost of imported equipment. These have divided their products into competitive and monopolistic or semi-monopolistic categories. In the case of the former, market conditions determine the price. Bharat Heavy Plates and Vessels also reports that norms are being worked out for a computerised pricing system.

K. R and D

15. Madras Refineries, BHEL, Tiruchi and Bhopal, report full-fledged R and D departments to solve day-to-day problems, adopt new techniques and improve processes. In the case of BHEL, Tiruchi, the department has developed new designs

and successfully marketed them. Bharat Heavy Plates and Vessels has just set up a one-man R and D unit.

L. Management

16. Only three enterprises, viz., BHEL, Bhopal and Tiruchi and Bharat Heavy Plates and Vessels, report on their management practices involving the use of PERT, Network Analysis, the ABC system of inventory control, value analysis in addition to other effective standardised management procedures.

M. Industrial Relations

17. There were no strikes or lock-outs in BHEL, Bhopal and Tiruchy during 1971-73. Madras Refineries had a one-day token strike in 1970 with 200 mandays lost without, however, any loss of production. Madras Fertilisers had one illegal strike. Bharat Heavy Plates and Vessels had one illegal strike lasting seven days in 1973. All these enterprises report good industrial relations. Mysore Iron and Steel reports on lock-out for eight days in 1972 with resultant losses of 70,539 man-days and Rs. 57.87 lakhs in production and Rs. 8.63 lakhs in wages. It also, however, reports sound industrial relations in the overall reckoning.

Concluding Comments

18. (i) The information-base of this paper is meagre. Only 13 public sector undertakings have replied to the questionnaire and within that number, only six have provided significant and relevant information. The information from these six replies is furthermore unequal. Only one, BHEL, Bhopal, has provided an exemplary model of a reply. It is difficult to generalise on the problem of capacity utilisation on this limited and unequal information base.

(ii) Much more information on the performance or non-performance of public sector undertakings is available in press reports and the annual reports submitted to Parliament by Union Government undertakings. Some tentative comments are therefore offered drawing on these three sources of information.

(iii) Undertakings which are producing to capacity have a clear concept of the state and nature of the demand for their products, whether of jobbing or captive kind or based on a free market. From this point of view it is essential that, in every unit, clear procedures for the analysis of demand and a machinery for forecasting are established.

(iv) Another issue on which capacity utilisation depends is pricing policy. This depends on the competitive capacity of the units of production in terms of internal and international prices; their export potential; quality control and techniques for cost reduction both through technological and economic means. (It may be noted that the primary data gives little information on issues 3 and 4 of the questionnaire.)

(v) Gives the inflationary conditions over the last decade, a tightening of the credit situation must be assumed as the normal condition during the Fifth Plan period. Inventory control and reduction through use of management techniques would be one way of significantly reducing working capital requirements. The importance of using modern management techniques to ensure capacity utilisation is clearly brought out in the replies sent by the BHEL units. This tool of management analysis should be made a "must" for all enterprises.

(vi) Two pre-requisites for successful capacity utilisation are a repair and maintenace service which does not wait for machinery to break down but which is engaged in continuous overhaul and preventive maintenance. Such an amenity can also reduce the need for

spares as would a counterpart R & D organisation which assimilates and adapts the findings of the collaboration and is able to become self-generating at a predetermined point of time in the near future, both in the matter of processes and personnel.

(vii) Another endogenous factor to which attention must be paid for capacity utilisation is the organisational framework of the public sector enterprises. The information for BHEL Enterprises as well as from other undertakings working to capacity which have not reported, such as the Integral Coach Factory, Perambur, M.A.M.C., etc. indicate that each enterprise must be given a basic minimum management and commercial autonomy and related enterprises be merged organisationally. This would involve their being given the freedom largely to decide their production schedules, expansion plans and diversification procedures and a two-way liaison with the national planning authority.

(viii) Furthermore, there is need to work out a break even point for all installed capacity taking into consideration the special factors besides price bearing on installed capacity (assuring two or three shifts) and its utilisation in each case. Generally speaking, the lower the break-even point, or optimised production level for each plant, the more efficient the process and equipment. The constraints which contribute to depressing production below that level need special attention and analysis. This approach will be evidently more suitable for industrial undertakings producing capital or producer goods or intermediate products which figure in the end products of other undertakings. It will also provide a measure of utilisation of capacity in industries as in Bhopal where each product, hydro or thermal generator, is sufficiently large (taking five years or so, to produce) for economies of scale to be subtended in the operation. In these cases one or more factors (such as supply of skilled staff, know-how) will set the upper limit to production and make possible the extension of production beyond those limits while constraints like raw materials, lack of credit with buyers, will operate so as to limit such extension of capacity. In these cases, it is possible at least in money terms, to state the minimum feasible utilisation of capacity factor-wise. A good deal of technical standardisation would be necessary in such units before the limiting point of economic utilisation can be arrived at. This should be promoted through consultancy and maintenance services available as a manufacturer's amenity and through information systems which counteract counter productive consumer preference.

(ix) The exogenous factors which promote or retard capacity utilisation are clearly brought out in the analysis. They include:

(a) Uninterrupted and continuing power supply and fuel availability;

(b) Adequate transportation and infrastructure;

(c) Availability of raw materials including inter-industrial buying and selling; and

(d) Industrial peace.

MADRAS INSTITUTE OF DEVELOPMENT STUDIES PUBLICATIONS

Publishers : (from whom copies may be ordered)
M/s. Sangam Publishers,
11, Sunkurama Chetty Street,
Madras-600001.

I. Books Published :

1. Income Earning Trends and Social Status of the Harijan Community in Tamil Nadu
   By A. Vagiswari (Price Rs. 12/-) Demy 8VO

2. Economics of Dry Farming in Tamil Nadu
   By R. K. Sampath and Jayalakshmi Ganesan
   (Price Rs. 15/-) Demy 8VO

3. Nutrition in Tamil Nadu
   By Rajammal P. Devadas (Price Rs. 15/-) Demy 8VO

4. A Guide to Research in Economics
   Edited by C. T. Kurien (Price Rs. 30/-) Demy 8VO

5. Land Reform in Tamil Nadu
   By G. Venkataramani (Price Rs. 15/-) Demy 8VO

6. Techniques of Perspective Planning
   Edited by Malcolm S. Adiseshiah. (Price Rs. 9-40) Crown Quarto

7. Plan Implementation — Problems and Prospects of the Fifth Plan
   Edited by Malcolm S. Adiseshiah. (Price Rs. 9-40) Crown Quarto

   (Items 6 and 7 are a joint MIDS and ITES enterprise published by Tamil Nadu Government Press from whom they can be purchased)

8. Poverty and Wage Goods Supply in Tamil Nadu
   By M. Ramamurthy

9. Women's Welfare in Tamil Nadu
   By K. G. Rama

II. In print :

10. Minor Irrigation and Productivity in Tamil Nadu
    By G. Venkataramani

III. Future Publications :

11. Rural Employment in Tamil Nadu
    By J. Viswanathamurthy

12. Introduction to Mathematical Economics and Economics Statistics
    By N. Rajagopala Rao
    V. Lakshmana Rao

13. Rural Primary Education and Adult Literacy in Tamil Nadu
    By Alexander Joshua

Regd. No. M. 8831

MADRAS INSTITUTE
OF
DEVELOPMENT STUDIES
(M I D S)

The Institute founded and run by Dr. Malcolm S. Adiseshiah is a charitable trust registered under the Madras Charitable Trusts Act.

The aim of the Institute is to contribute to the economic and social development in Tamil Nadu and India.

The activities of the Institute are :

— Studies and action-oriented research in micro-development problems ;

— Documentation and library service in development programmes ;

— Exchange and dialogue at the State, National and International levels on development issues ;

— Publication of papers and research results of the Institute.

St. Louis Institute Press, Canal Bank Road, Adyar, Madras-600 020
Editor : Dr. Malcolm S. Adiseshiah.